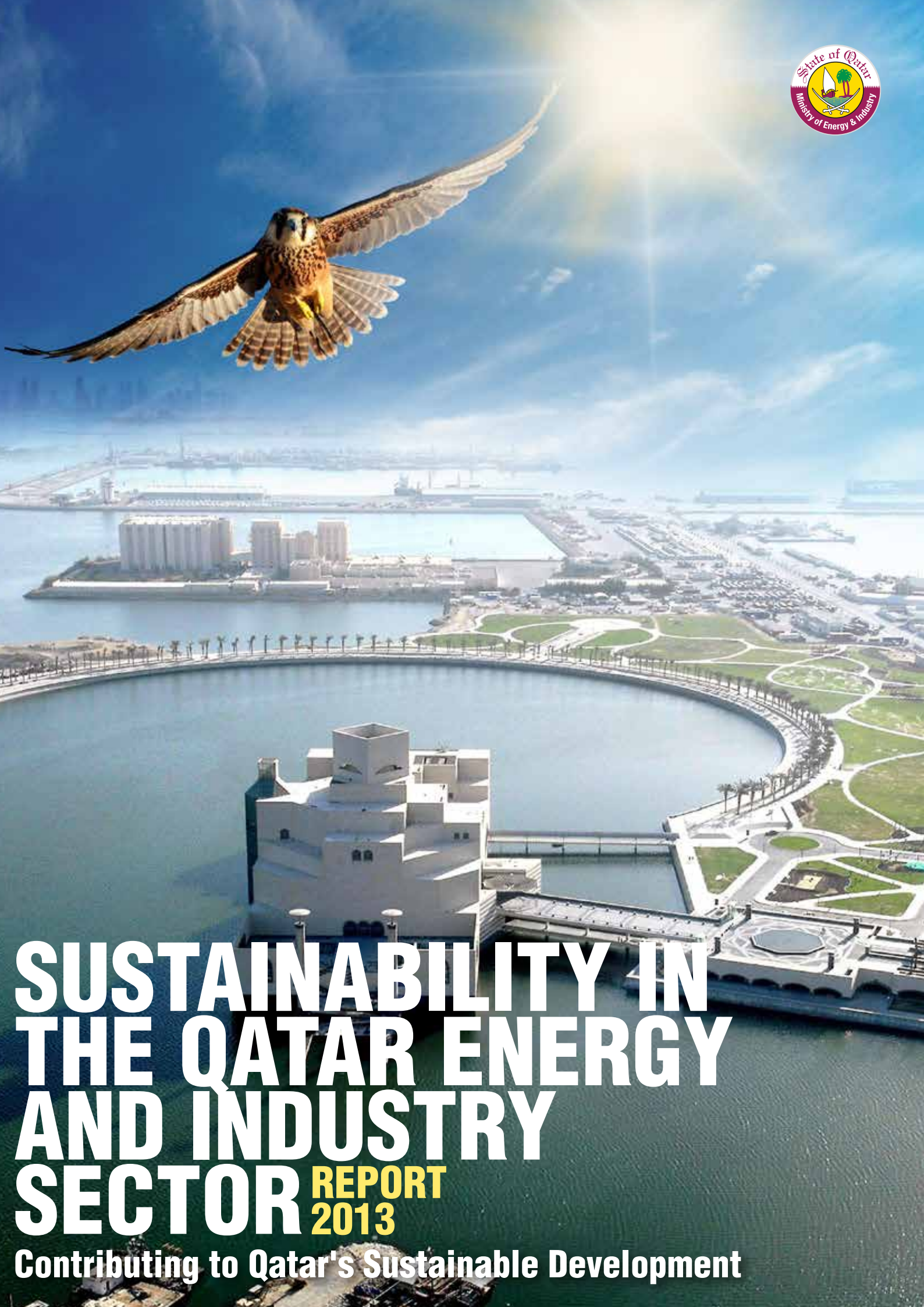
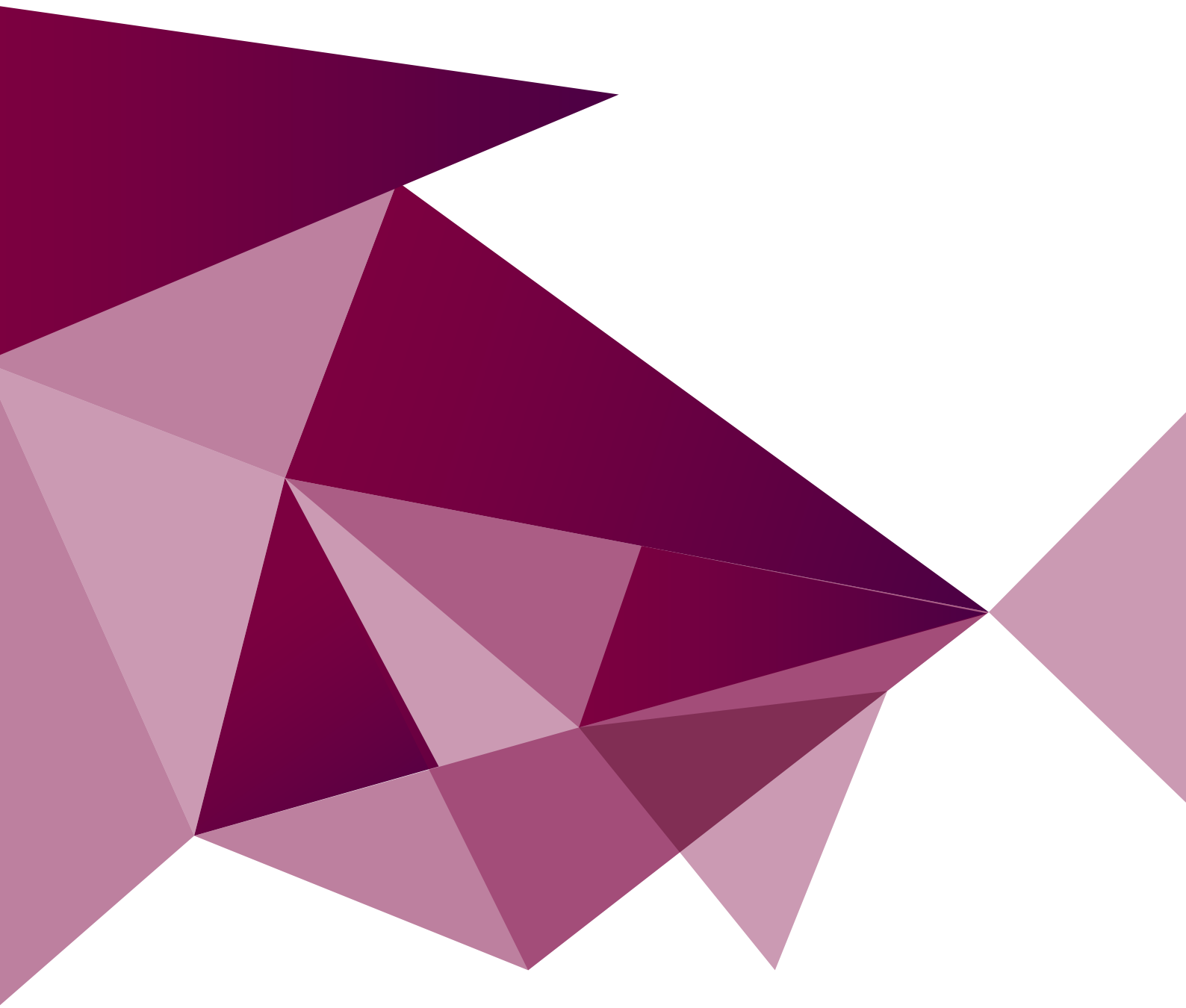


SUSTAINABILITY IN THE QATAR ENERGY AND INDUSTRY SECTOR REPORT 2013

Contributing to Qatar's Sustainable Development



His Highness

Sheikh Tamim Bin Hamad Al-Thani

Emir of the State of Qatar

ABOUT THIS REPORT

Welcome to the fourth annual report on the state of sustainability in the Qatar Energy and Industry Sector. The report provides consolidated information and analysis on the performance and approach of 36 companies on a range of economic, environmental and social topics.

The report has been produced by the Qatar Petroleum Health, Safety and Environment Regulations and Enforcement Directorate (DG) as part of the sector-wide Sustainable Development Industry Reporting (SDIR) programme, an initiative lead by His Excellency the Minister of Energy and Industry for Qatar.

A sector reporting framework and 42 programme indicators have been used to produce the report. To ensure relevance and comparability, the information within the report has been developed from input from reporting companies, and using international reporting guidance. The guidelines include the Global Reporting Initiative (GRI) G4 reporting guidelines (with its Oil and Gas Sector Supplement), and the sector-specific IPIECA reporting guidelines. More information on these frameworks is included in Appendix C.

A review has been conducted on the performance data submitted by reporting companies. Its overall level of reliability and assurance, as declared by the participating companies, has been presented on page 21. The data consolidation and the qualitative comment in the report have been reviewed by a range of stakeholders, but no formal third-party assurance has been conducted. The systems and processes for data collection and calculation at a company and sector level continue to mature. In light of this, some figures differ from those presented in previous reports as a result of re-statements or an increase in the number of companies able to provide data on a given indicator. Details regarding the calculation methodology and completeness of each indicator are provided in Appendix B.

For more information on this report and the SDIR programme, please visit the online version of the report at www.hse-reg-dg.com/qeisr2013/WWW/index.html.

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MESSAGE FROM MINISTER OF ENERGY & INDUSTRY

It is my pleasure to launch the fourth annual report on sustainability within the energy and industry sector, capturing the efforts of our Sector Sustainability Programme and the corresponding strategies and performance of 36 companies in the sector.

This report marks an important evolution in the programme. As we continue to make significant progress in developing a strong reporting foundation, we are now able to intensify our focus on performance improvements, long-term strategy development and ambitious target-setting, implementation of supportive policies, and stronger international engagement.

Strengthening the reporting foundation

The sector's reporting efforts improved substantively in 2013. This report covers significantly more performance measures, and yet has simultaneously achieved a higher reporting rate by participating companies. A key breakthrough has been the number of participating companies issuing public sustainability reports. In our view, this marks a new regional standard for transparency with Qatar now having more public reporters in the energy and industry sector than any other country in the Arab region.

The sector report and individual company reports have collectively become a transparent public reference on the sector's economic, social, health, safety and environmental performance.

Enhancing strategy and supportive policies

Strategically, progress has been made in working towards a complete sector-wide sustainability strategy. As another key breakthrough, more than half of all participating companies have developed a five-year sustainable development strategy.

By aggregating company strategies, the Sector Sustainability Programme 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, developed under the wise leadership of His Highness Sheikh Tamim bin Hamad Al-Thani, the Emir of Qatar.

It is also significantly enhancing the ability of the sector to contribute to, and engage in, important international efforts to ensure sustainable development.

Driving sector performance

The continued strengthening of reporting also offers increasing opportunity to drive performance gains across the four priority areas of Qatar's National Vision 2030.

Economically, in 2013 the sector continued to create more jobs, procure more of its goods locally, and continue its economic diversification efforts, creating greater value from Qatar's natural gas assets.

In the focus area of human development, the sector delivered more than one million hours of training to employees, an increase of 15%. The sector also enhanced health and safety performance by decreasing recordable injury and illness rates. The sector increased its investment in community projects by 19% as part of its contribution to social development, and environmentally, flaring decreased as did the amount of wastewater discharged to the sea.

These successes are only passing milestones, with the sector firmly committed to further performance gains, reducing our levels of future risk and enhancing our contribution to society. A key priority is our ongoing effort to achieve zero fatalities and harm. Regrettably, the sector recorded one fatality in 2013. Other priorities include reducing greenhouse gas emissions and improving the management of natural resources.

Future goals

We shall continue to pursue our sustainability journey, being wise in the exploitation of our natural resources, being foresighted, and executing our responsibilities with diligence.

The ambitions of the sector require further improvements in our Sector Sustainability Programme in 2014, including:

- Intensified integration of sustainability strategy and performance oversight at the executive and board levels.
- Completion of five-year sustainable development strategies by all companies, with increased specificity of performance targets.
- Achievement of 100% reporting against all relevant measures by all companies.
- Achievement of substantive increase in levels of internal and external assurance of qualitative and quantitative information.
- Issuing of public sustainability reports by 75% of participating companies no later than May 2015.
- More proactive, systematic and extensive engagement with employees, contractors, communities, partners, policy makers and international stakeholders to drive enthusiasm and commitment towards sustainable development and the economic, human, social, health and safety and environmental performance aspirations of the sector.

I would like to take this opportunity to thank the companies for the important gains made in this annual cycle, which have established a firm foundation for evolution towards accelerated performance improvements.

H.E. Dr. Mohammed Bin Saleh Al-Sada
Minister of Energy and Industry
Chairman and Managing Director, Qatar Petroleum

MESSAGE FROM THE DIRECTOR OF THE HSE REGULATIONS AND ENFORCEMENT DIRECTORATE

As the 2013 reporting cycle draws to a close, it is clear that the sector sustainability programme is continuing to improve, supporting 36 companies in the development of their sustainability management and reporting programmes.

This year, participation in the programme has improved in many ways, with more companies submitting more data and releasing their sustainability reports to the public. For the first time, we have also had companies report on their sustainability strategies and approaches to sustainability management and governance. With this greater depth of knowledge and insight into performance and future plans, the programme can continue to evolve and deliver greater value to companies and the sector as a whole.

Some of the highlights of the programme this year include:

- Increased public reporting: With more companies expected to release a 2013 report to the public in 2014. This will dramatically increase the sector's transparency, accountability and engagement with its stakeholders. We are committed to providing the support necessary for 28 companies, 75% of the sector, to release a public report in 2015.
- Greater completeness: The sector achieved 85% reporting on all programme indicators in 2013 despite an increase in the number of indicators by one-third, including a request for additional safety performance data. We are committed to supporting companies in achieving 100% reporting on 2014 performance for all relevant programme's indicators.
- An opportunity to improve data quality: As only 44% of data submitted in 2013 was reported as having been internally or externally assured, data quality is an area for improvement in 2014. We are committed to encourage more companies in attaining assurance of their sustainability data so that we achieve 75% assurance coverage for 2014 performance data.
- We are committed to supporting all companies in developing and reporting on five-year strategies that includes performance targets.

To enhance participation in the programme, support and guidance were provided on reporting, assurance, strategy and sustainability management and governance in 2013. For the first time, feedback was provided to each company on the strengths and weaknesses of their previous year's report in order to encourage continuous improvement.

We also continued to strengthen the awards programme with the inclusion of a judging panel that selected the winners in an assessment process managed by an independent third-party. The 'Feedback' initiative of last year also helped the companies to make improvements to their reports.

For the future, we are committed to providing additional assistance in order to achieve the goals as set out by His Excellency the Minister for Energy and Industry. This will include:

- Launching the Sustainability Data Management System (SDMS), an online tool for all companies to securely gather, store and verify their sustainability data and information, as well as benchmark their performance while maintaining confidentiality.
- Reviewing the sector reporting guidelines to provide clear definitions of reporting terms, to help drive consistent measurement and reporting of all indicators, thus improving data comparability.
- Providing more feedback on reporting as well as performance through the development of benchmark reports.

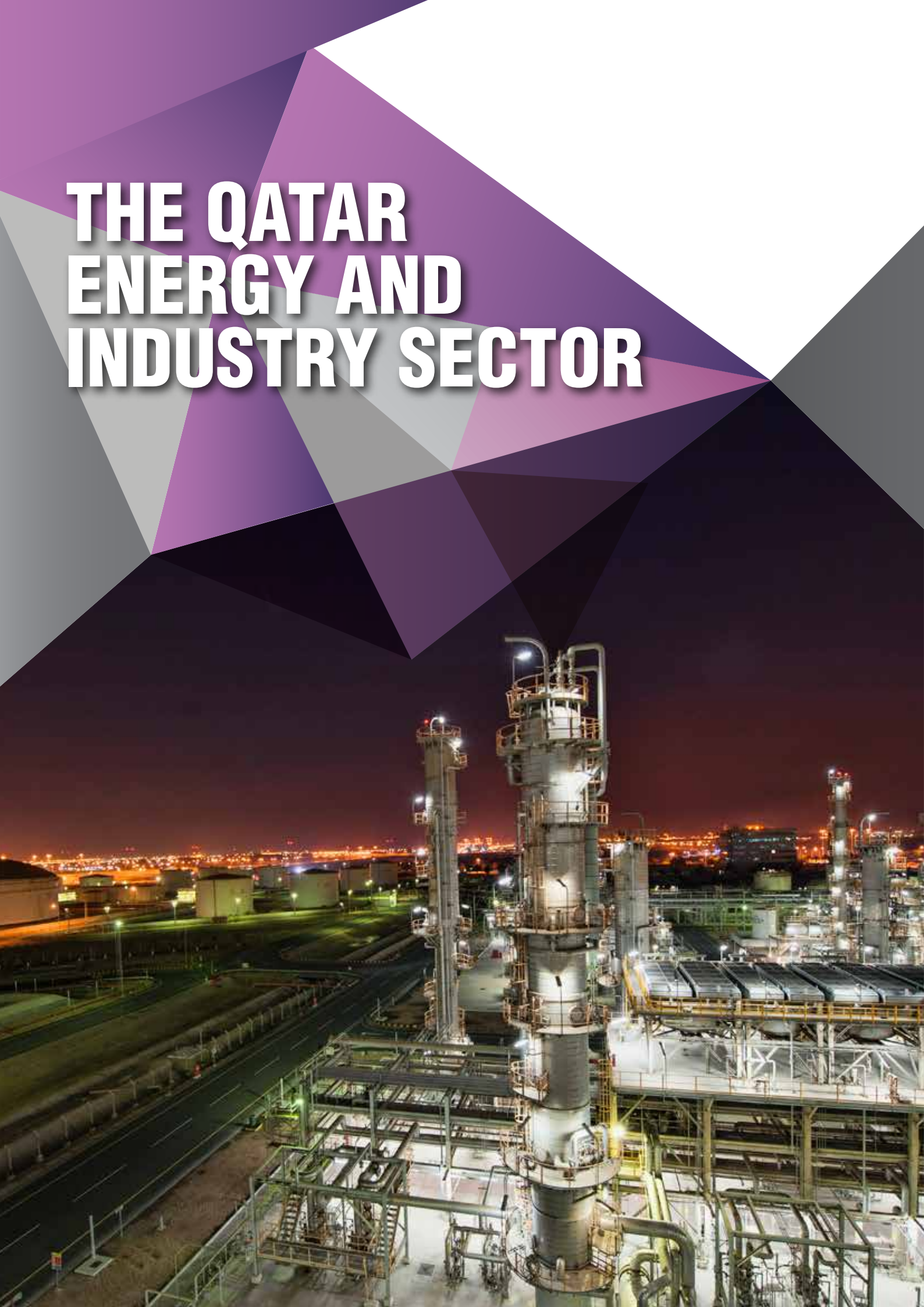
We will also continue to engage nationally and internationally, providing updates on the progress of the sector and sharing our learning with others who are interested in the programme.

I would like to pay tribute to the hard work and dedication of all the companies that have participated this year, and thank them for their continuing commitment to the success of the programme.

I would also like to take this opportunity to extend my thanks to His Excellency Dr. Mohammed Bin Saleh Al-Sada for his visionary leadership of the sector as it continues on its sustainability journey.

Saif S. Al-Naimi
Director
HSE Regulations and Enforcement Directorate (DG)

THE QATAR ENERGY AND INDUSTRY SECTOR



AN OVERVIEW OF THE SECTOR

Qatar's energy and industry sector is made up of a diverse mix of upstream, midstream and downstream companies. The sector produces a wide range of products and services that support Qatar's development and are exported across the Gulf region and to more than 60 countries worldwide. The 36 companies participating in the sector-wide sustainability initiative represent some of the most significant companies in the sector and country, some of which are also global leaders in their field.

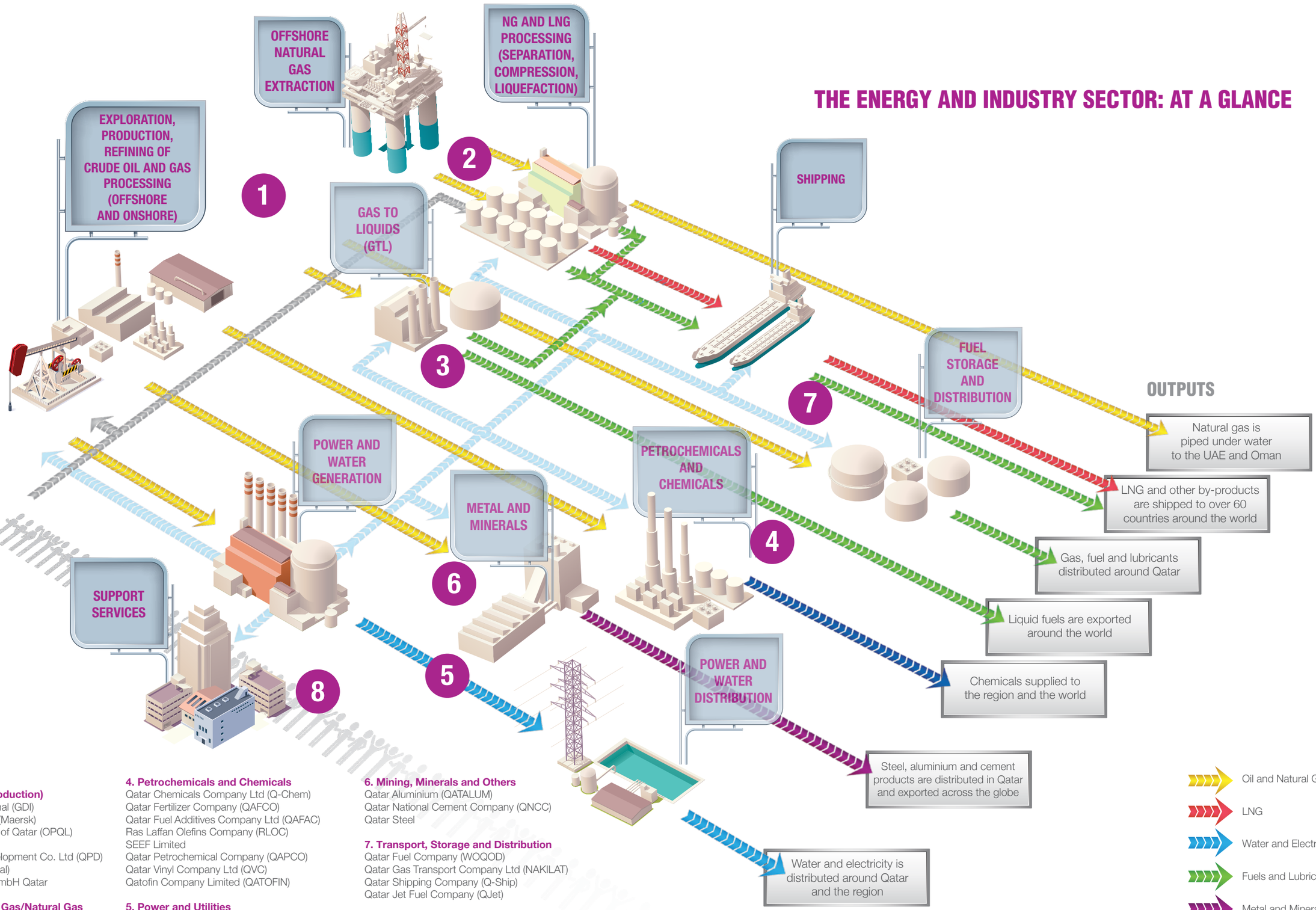
Dukhan Old Well

MAP OF THE SECTOR AND SUBSECTORS

The diagram on the following pages provides a snapshot of the main activities, products and services delivered by the 36 companies covered by this report. Companies have been clustered into eight subsectors based on their primary product or service. Qatar Petroleum (QP), although placed within the oil and gas exploration and production subsector, has activities that extend across all aspects of the sector. More information on QP's activities can be found on their website (http://www.qp.com.qa/en/QPActivities/QPActivties%20Images/QP_Map_2013.swf).

Additional information on all of the companies participating in the Sector Sustainability Programme can be found in appendix A.

THE ENERGY AND INDUSTRY SECTOR: AT A GLANCE



1. Oil and Gas (Exploration and Production)
Gulf Drilling International (GDI)
Maersk Oil Qatar A/S (Maersk)
Occidental Petroleum of Qatar (OPQL)
Qatar Petroleum (QP)
Qatar Petroleum Development Co. Ltd (QPD)
TOTAL E&P Qatar (Total)
Wintershall Holding GmbH Qatar

2. Liquefied Natural Gas/Natural Gas
Qatargas
RasGas
Dolphin Energy

3. Refining
ORYX GTL Ltd
Qatar Shell GTL Limited

4. Petrochemicals and Chemicals
Qatar Chemicals Company Ltd (Q-Chem)
Qatar Fertilizer Company (QAFCO)
Qatar Fuel Additives Company Ltd (QAFAC)
Ras Laffan Olefins Company (RLOC)
SEEF Limited
Qatar Petrochemical Company (QAPCO)
Qatar Vinyl Company Ltd (QVC)
Qatofin Company Limited (QATOFIN)

5. Power and Utilities
Mesaieed Power Company Ltd (M Power)
Qatar Electricity and Water Company (QEWC)
Qatar Power Company (Q-Power)
Ras Girtas Power Company (RGPC)
Ras Laffan Power Company (RLPC)
Qatar General Electricity and Water Company (KAHRAMAA)

6. Mining, Minerals and Others
Qatar Aluminium (QATALUM)
Qatar National Cement Company (QNCC)
Qatar Steel

7. Transport, Storage and Distribution
Qatar Fuel Company (WOQOD)
Qatar Gas Transport Company Ltd (NAKILAT)
Qatar Shipping Company (Q-Ship)
Qatar Jet Fuel Company (QJet)

8. Support Services /Shareholders
ConocoPhillips Qatar
ExxonMobil Qatar
Saipem Qatar

- Oil and Natural Gas
- LNG
- Water and Electricity
- Fuels and Lubricants
- Metal and Minerals
- Chemical Products
- Support

HIGHLIGHTS FROM 2013

SECTOR SUSTAINABILITY PERFORMANCE HIGHLIGHTS

A snapshot of performance highlights across the sector's six sustainability areas is provided below (showing data for 2013, or reduction / increase versus 2012, unless stated otherwise). More detail and analysis on each, and comment on areas for improvement, can be found in the relevant chapters of this report.

HEALTH AND SAFETY

16% reduction in contractor LTIR and TRIR	**13%** reduction in employee occupational illness	**6,104** emergency response drills conducted	**15%** reduction in employee TRIR

THE ENVIRONMENT

36% of waste recycled 2% short of the national target of 38%	**2.2%** reduction in fresh water purchased	The sector recycled **24.5 million** m^3 of water	**9%** reduction in NOx Emissions

CLIMATE CHANGE AND ENERGY

3% reduction in natural gas consumed per tonne of production	**2.4%** reduction in natural gas usage	**13%** reduction in flaring	Electricity consumption per capita reduced by **10%**

ECONOMIC PERFORMANCE

1,174 new jobs created	Median rate of local spending **60%**	Largest exporter of LNG and Helium in the world	**153 billion** US Dollars of revenues a 6.4% increase

SOCIETY

19% increase in community investment spending	**143 million** US Dollars invested in community development	Improved transparency through increased reporting on **human rights**	**6** companies reporting a stand-alone community investment strategy

WORKFORCE

306 more Qataris employed by the sector	**15%** increase in average hours of training per employee	**39,002** full-time employees	**1 million** hours of training delivered

The performance highlights above are calculated using data reported by the 36 companies within the energy and industry sector. The number of companies reporting each metric may vary, details of which can be found throughout the full report and in Appendix B.

SUSTAINABILITY AND THE QATAR ENERGY AND INDUSTRY SECTOR

Qatar Sustainable Development
Energy & Industry Report

THE QATAR ENERGY AND INDUSTRY SECTOR SUSTAINABILITY PROGRAMME

The Sector Sustainability Programme began in 2010 with the establishment of the Sustainable Development Industry Reporting (SDIR) programme. Initially a voluntary programme, it focused on encouraging companies in the sector to develop their own sustainability reports, information from which was consolidated to create a sector-wide report. Four years on, the Sector Sustainability Programme has incorporated additional dimensions, including: an awards scheme, strategy development, performance assessment and target setting, policy input and alignment, and national and international engagement.

Sector Sustainability Programme Purpose

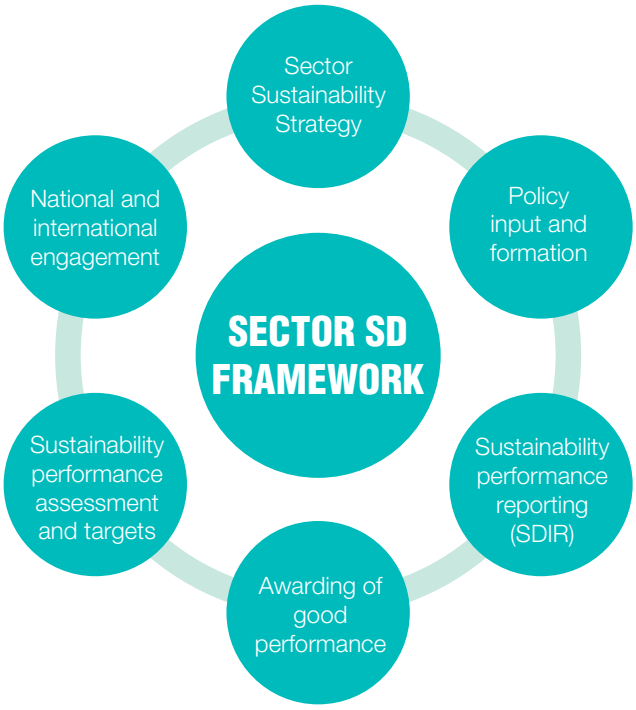
Enhancing the management of economic, environmental and social impact within the energy and industry sector, optimizing its contribution to the State of Qatar.

Sector Sustainability Programme Objectives

- 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.

Programme Framework

The figure below sets out the six main components of the sector sustainability programme.



Sustainability performance reporting (SDIR)
Provide a mechanism for individual companies and the sector as a whole to report annually on sustainability performance.

Policy input and formation
Act as a forum for collective policy dialogue, input and formation.

Sector Sustainability Strategy
Build and maintain a sector-wide sustainability strategy, aligned with company and national five-year strategies and plans.

National and international engagement
Be a model for other sectors to contribute to national sustainable development ambitions, and act as a point of reference internationally.

Sustainability performance assessment and targets
Conduct continuous performance assessment, benchmarking and short and long term target setting.

Awarding of good performance
Reward companies for good sustainability performance and reporting.

Programme Priorities and Indicators

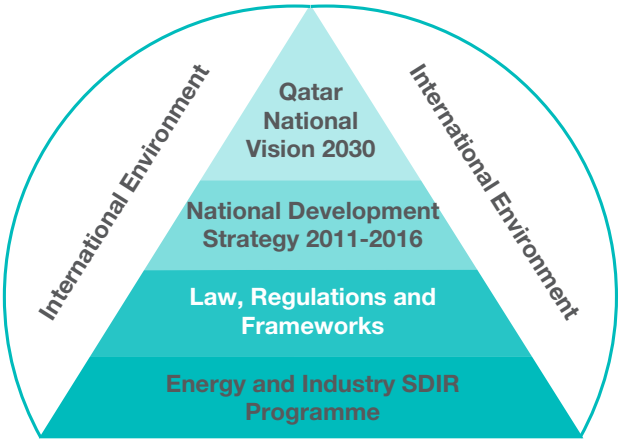
The sector's sustainability priorities are categorised into the six areas below. Within each area the priorities have been determined using a limited materiality assessment process that draws on 'top-down' policy frameworks and 'bottom-up' company submissions. Sources include the Qatar National Vision (QNV) 2030, the National Development Strategy (NDS) 2011-2016, issues identified by participating companies in their sustainability reports and sustainability strategy submissions, and other international reporting guidelines including those issued by GRI, IPIECA, and OGP.

HEALTH AND SAFETY	• Personal Safety • Health and Wellness • Process Safety	• Emergency Response Preparedness • Workforce Engagement • Supervision and Compliance
THE ENVIRONMENT	• Water Management • Spills • Waste Management	• Air Emissions • Biodiversity
CLIMATE CHANGE AND ENERGY	• Energy Use • GHG Emissions	• Flaring • Alternative Energy
ECONOMIC PERFORMANCE	• Contribution to National GDP • Production and Expansion	• Diversification • Indirect Economic Impact
SOCIETY	• Community Engagement and Investment • Human Rights	• Business Integrity
WORKFORCE	• Qatarization • Employee Development	• Welfare and Engagement • Diversity and Inclusion

A range of indicators are used to measure performance with respect to each topic highlighted in the table left. Participating companies are required to report on these performance indicators annually. In 2013, the number of indicators increased from 33 to 42, making the achievement of 100% reporting on all indicators a challenge. However, the increase has improved the data analysis provided within this report and the overall volume of data collected. In 2014, development of common definitions for each of the indicators to ensure greater accuracy and data comparability. More detail on all 42 indicators can be found in Appendix B.

Programme Alignment

As demonstrated throughout this report, the sector's approach to sustainability is built in line with national and international frameworks. An 'alignment triangle' for each of the six sustainability areas is placed at the beginning of each chapter. Analysis of the sector's performance against relevant national targets is provided in the text.



Sector Sustainability Programme Alignment Triangle

Sector Sustainability Strategy

Each participating company was requested to begin development of a five-year sustainability strategy in 2013. A template for reporting on progress was provided and 19 of the 36 participating companies completed it, providing insight into their current plans and strategies. This information has been used to help determine the sector's sustainability priorities.

It is expected that all companies will complete their sustainability strategies in 2015 and use them as a framework to set and submit appropriate performance based targets. These targets will be used to project the progress of the sector over the coming years, helping policy makers to target support where most valuable, and provide a starting point for the development of an overarching sector-wide sustainability strategy.

Sector Sustainability Management and Governance

In 2013, companies were asked to provide information on their current approach to sustainability management and governance within their organizations. The 16 responses received show significant variance in how companies are approaching sustainability, and differing levels of maturity in company programmes. Across all, however, there is a significant increase in activity and commitment. Key features of those that reported on sustainability management and governance are set out below:

- **Responsibility** – In most companies, ultimate responsibility for sustainability lay either with the board of directors or executive management. For some companies, sustainability has been deemed the responsibility of every employee with relevant accountabilities integrated into their job descriptions. In three cases, financial incentives for employees have been linked to the company's sustainability performance.
- **Management** – Sustainability is managed by focal points from various company departments. For the majority of companies, the health, safety and environment (HSE) department or communications department lead sustainability efforts. Some companies have placed management responsibility within their corporate strategy or planning departments. One company (Qatalum) has created a dedicated sustainability manager position with full-time responsibility for managing and reporting on sustainability issues. Four companies have reported that they have a cross-functional sustainability team in place, with another four planning to set up teams in 2014.
- **Policy** – All companies have reported a range of policies and procedures covering sustainability topics, such as the environment, health and safety, community investment, human rights, ethics and integrity, to name a few. While some companies integrate sustainability considerations into their existing frameworks, five companies within the sector have reported the creation of a dedicated sustainability policy, including Dolphin Energy, M Power, QAFAC, Qatar Steel and Total.
- **Integration into strategy** – Five companies have reported that sustainability has been demonstrably integrated into their core business strategy, including Dolphin Energy, QAFAC, Qatalum, Qatargas and RasGas.
- **Capacity building** – Around half of the reporting companies provided some sort of specific sustainability training, workshop or awareness session for their employees. A handful also sent their sustainability focal point or team to an external sustainability training session. One company (Dolphin Energy) provided sustainability awareness sessions for all employees across its four locations in 2013.

QP Headquarters

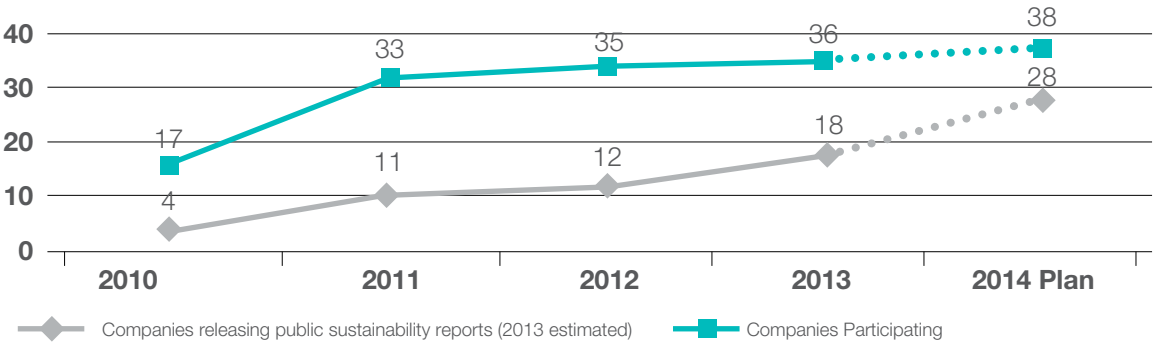
SECTOR SUSTAINABILITY PROGRAMME PARTICIPATION AND DATA QUALITY

Participation in the programme continues to grow. More companies have provided reports, and submissions have included greater volumes of performance data. The number of companies releasing their reports to the public also continues to increase. As participation increases and the programme matures, attention is turning towards the completeness and quality of the data and information being reported to ensure it is representative and reliable.

Programme Participation

This year saw the addition of the Qatar General Electricity and Water Corporation as a reporting entity. Known as KAHRAMAA, this enterprise is the dedicated water and electricity transmission, distribution and delivery company for Qatar. Its addition to the group has taken the total number of companies participating to 36.

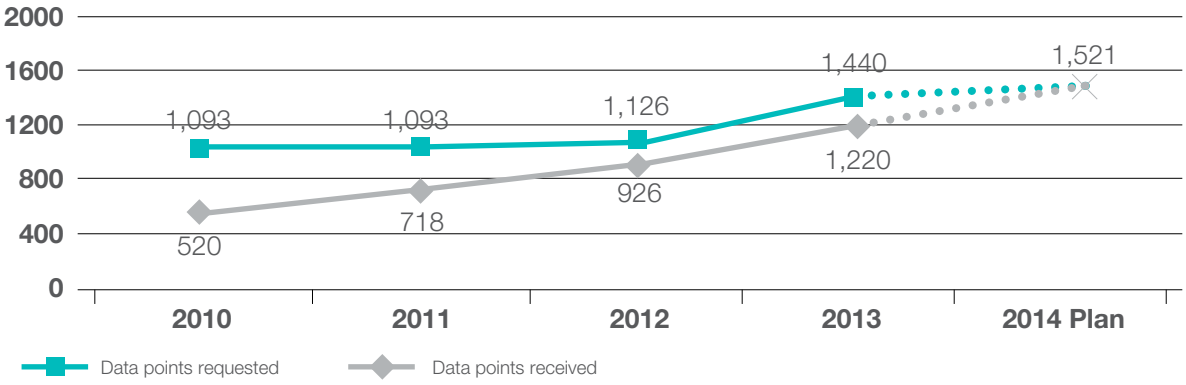
At the time of finalising this report, 18 companies had plans to release their sustainability reports to the public, a significant rise from the number released in 2012. The programme will continue to encourage participating companies to make their reports public, to increase transparency and stimulate stakeholder engagement.



Companies 2013 Sustainability Reports

Programme Completeness

A focus of the programme has been to encourage participating companies to achieve complete reporting on all relevant programme indicators. This has been a challenge due to the increase in the number of programme indicators from 33 to 42 in 2013. Nevertheless, the sector has recorded a modest overall increase in data completeness to 85%, a result of efforts by many companies to achieve a higher level of performance disclosure. The target for 2014 is 100% reporting by all companies on all indicators relevant to them.



Programme Completeness	2010	2011	2012	2013	2014 Plan
Number of data points requested from companies	1,093	1,093	1,126	**1,440**	1,521
Number of data points reported by companies	520	718	926	**1,220**	1,521
Completeness (%)	46%	66%	82%	**85%**	100%

2012 Report Launch

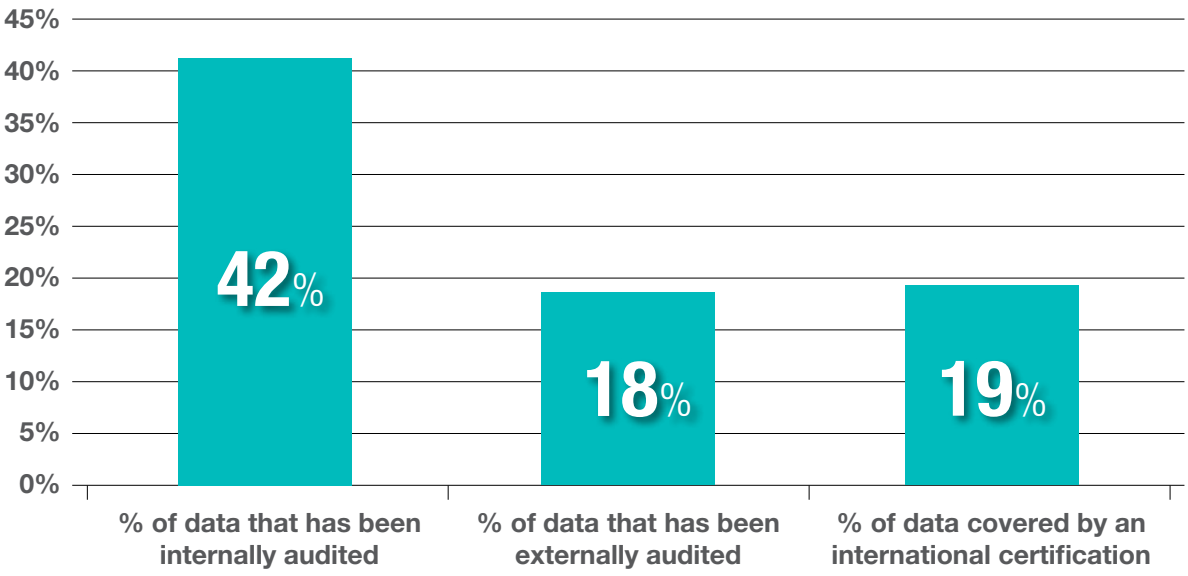
Data Quality and Assurance

The annual sector report is now a public reference point on the sector's performance. As such, emphasis has been placed on ensuring the quality of the data being presented. As the programme develops, improvements are being made at both the company and sector level in how data is collected, calculated, managed, verified and reported. These improvements mean that greater confidence can be placed in the data presented. As a result of continuing refinement, data may vary from previous reports due to re-statements.

In 2013, greater emphasis has been placed on data checking, with more detailed scrutiny of restatements, outlying data, and significant year-on-year variations. Issues that were identified through this analysis were raised with the relevant company in order to resolve each concern and increase the accuracy of the data. More information on this can be found in Appendix B.

The programme continues to encourage companies to move forward with assurance of their sustainability data, releasing a guidance note on the subject in November 2013. The level of assurance of company data is not yet fully discernible. However, based on the submissions by the companies, at least 42% of the total data set has been through some form of internal audit and 18% through some form of external review. Three companies (QAFCO, QAFAC and RasGas) had a third-party conduct an assurance process for their reports. Furthermore, 19% of the data set is covered by an international certification, such as an ISO certification, on the system for generating the data.

The goal for the 2014 reporting cycle is for 75% of the data to be covered by some form of internal or external assurance. It is expected that the launch of the Sustainability Data Management System (SDMS) will continue to improve the quality of the data provided, and make the data submission process easier for participating companies.



Data Assurance	2011	2012	2013
Number of reports with third-party assurance statements	0	1	3*

**Based on information received at the time of publication. The final number may be higher.*

SECTOR SUSTAINABILITY PROGRAMME SYSTEMS, TOOLS AND CAPACITY BUILDING

DG continues to provide companies with tools and guidance to support the adoption of sustainability reporting and to help them develop their capacity to manage the key issues. Each company also has the opportunity to develop through engaging in the programme and attending its regular workshops hosted by DG.

2013 SD Workshop

Guidance

Guidance provided to companies participating in the programme includes:

- Sustainability Reporting Guidelines.
- Guidance on approaches to reporting on water management, energy use, health management, climate change and safety.
- Guidance on conducting assurance (released in 2013).
- Guidance on a five-year sustainability strategy (released in 2013).
- Guidance on sustainability governance and management systems (released in 2013).
- Case studies of good practice.

In 2014, the sustainability reporting guidance for the sector will be reviewed and consolidated. Additional support will be provided in future, as necessary.

Workshops, Meetings and Events

Capacity building is an ongoing priority for the programme given the relative newness of sustainability management as a concept for organisations. A range of meetings, workshops and events were hosted in 2013 to provide opportunities for learning and development for CEOs and reporting focal points.

- **Face-to-face Meetings** – In the first quarter of 2013, DG completed meetings with each company participating in the SDIR programme. This was a chance for each company to ask questions and gain insight into the programme's development and priorities. A two-page feedback form was also presented in order to highlight the gaps and opportunities for improvement in each company's sustainability reporting.
- **9th May: Good Practice Sharing Workshop** – This workshop focused on five of the award-winning companies from 2012, who presented

their reporting achievements, challenges and plans for the future. There was also time for the sector to discuss the programme's development and direction. Output from the session is available online - http://www.hse-reg-dg.com/hse/hse.nsf/web/Event2013-SDWorkshop-9May

- **17th September 2013: Annual Sector Report Launch and Awards Ceremony** – This event, held in the Qatar National Convention Centre, was attended by Ministers, CEOs, media and the focal points from reporting companies. The event focused on the launch of the 2012 sector report, the awards ceremony, and the launch of the programme video and logo. Output from this event is available online - http://www.hse-reg-dg.com/hse/hse.nsf/web/Event2013-SDIR2012-17Sep
- **18th November 2013: Good Practice Sharing Workshop** – This workshop was used to kick off the 2013 reporting cycle, with time spent reviewing the programme's development and considering its future direction. All six award winners from 2013 provided insight into their reporting and performance improvements. Output from the session is available online - http://www.hse-reg-dg.com/hse/hse.nsf/web/Event2013-SDWS-18th%20Nov
- **10th December 2013: Annual Industry Safety Report 2013 Consultation Workshop** – The main objective was to host a consultation with the sector regarding annual safety reporting. Based on the feedback from the operators, it was decided to merge the annual safety reporting with the existing sustainability reporting. Templates were modified in line with SDIR requirements and issued to the operators to collect data specifically on safety indicators.

Sustainability Data Management System (SDMS)

In 2014, the programme will launch an online Sustainability Data Management System (SDMS). The system will automate the process of gathering, storing, analysing and benchmarking sustainability performance data, and will provide a platform for programme communication and engagement.

All participating companies will have access to the system, hosted in a secure environment, and will be able to store company performance data, case studies and other relevant information such as imagery and reports. Companies will also be able to generate benchmarking reports that will enable them to gauge their performance against their peers within the sector and their specific subsector - with confidentiality maintained. His Excellency the Minister for Energy and Industry will have a dedicated terminal in order to review the most up-to-date sector performance data.

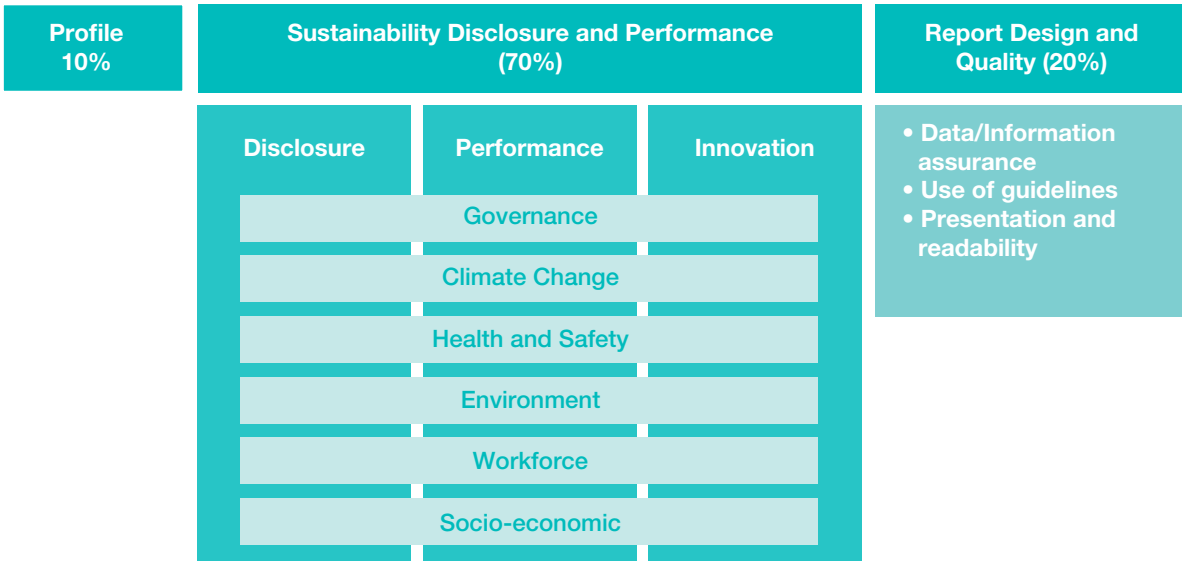
2013 SD Workshop Participants

EXCELLENCE IN SUSTAINABILITY AWARDS

The sector sustainability awards programme is designed to promote best practice in sustainability performance and reporting. Using the sustainability reports submitted by participating companies every year, a panel of internationally-renowned judges from the global sustainability arena assess which companies have demonstrated excellence across the six main areas of the SDIR programme. To ensure objectivity, an independent third-party, appointed through a competitive tender process, manages the judging process.

> "We are seeing real progress among the companies recognized, and I am confident the industry in Qatar is realizing the benefits of reporting as a tool to drive better management and better performance."
>
> *Ms. Judy Kuszewski*
> *(Judging panel member for 2012 awards)*

Assessment Criteria



The assessment criteria for 2012 sustainability reports remained the same as in previous years, yet the awards distributed included awards for excellence in reporting, as well as a new category of awards for performance in the programme's focus areas for the year. In 2012, the focus areas were energy and water management and health and well-being of the workforce. For the first time, all companies participating in the programme were given detailed feedback using the results of the assessment, with recommendations for where they could improve their reporting.

Awards for 2012 Reports

Reporting Awards			
Excellence in reporting (for organisations with more than 500 employees)		**Excellence in reporting** (for organisations with fewer than 500 employees)	
Winner	**Runner-up**	**Winner**	**Runner-up**
RasGas	Qatar Fertilizer Company (QAFCO)	Mesaieed Power Company (M Power)	Qatar Fuel Additives Company (QAFAC)

Performance on Health, Energy and Water Management Award	
Excellence in performance (for organisations with more than 500 employees)	**Excellence in performance** (for organisations with fewer than 500 employees)
Qatargas	Qatar Vinyl Company (QVC)

Awards for 2013 Reports

The awards programme for the 2013 reporting cycle will continue to shift its focus to recognise excellence in performance and innovation. The following awards will be presented in June 2014 together with the launch of this report.

Excellence in Overall Sustainability Reporting
Excellence in Sustainability Management
Excellence in Occupational Health and Safety - 2 awards
Excellence in Environmental Management - 2 awards
Excellence in Socio-economic Contribution and CSR Activities - 2 awards
Special Commendation for Sustainability Innovation - (should there be a worthy initiative)

Maersk Oil Robot Olympiad 2013

PROGRAMME COMMITMENTS

A range of commitments for the 2013 reporting cycle were included in the 2012 sector report. Progress made against these commitments is provided in the table below.

2013/2014 Commitments	Status (● completed, ◔ in progress)
General SDIR Commitments	
Transition to a combination of web and print based sustainability reporting by 2014	● www.hse-reg-dg.com/qeisr2012/WWW/index.html
Formulate a sector-wide sustainable development strategy, based on the company five-year strategies	◔ Company strategies have been gathered and a sector strategy is now being formulated
Formalise a sector-wide performance review process	◔ A performance benchmarking tool is being developed to support this objective
Formalise a multi-stakeholder engagement process for policy review, recommendations and formation	◔ High level conceptual stage
Assess the company sustainability reports and present awards	● For more information, see page 24
Take additional steps to share the programme experience internationally	◔ A number of presentations were made and relationships are being formalised
Support and Tools Related Commitments	
Produce guidance for companies to support their reporting on five-year sustainable development strategies and plans	● Distributed to companies in November 2013
Update the programme sustainability performance reporting guidelines for companies, including improved definitions of the programme indicators	◔ Due for launch in Q4 2014
Produce a guidance note for companies about sustainability performance assurance processes	● Distributed to the companies in November 2013
Produce guidelines to support reporting on the 2013 focus area of sustainability governance, and the 2014 focus area of social responsibility and workforce	◔ The guidelines for sustainability governance were distributed to the companies in November 2013
Host technical training sessions on sustainability strategy and reporting using international guidelines	● See details of sessions hosted on page 22-23
Create an online data and case study submission system, including a benchmarking feature	● To be launched in Q4 2014
Participating Company Specific Commitments	
Produce a 2013 public sustainability report by June 2014	It is estimated that 18 companies will release a public report
Produce and report on a five-year sustainable development strategy	19 companies have so far submitted their current plans, the remaining companies continue to develop their strategies

2014-15 Commitments

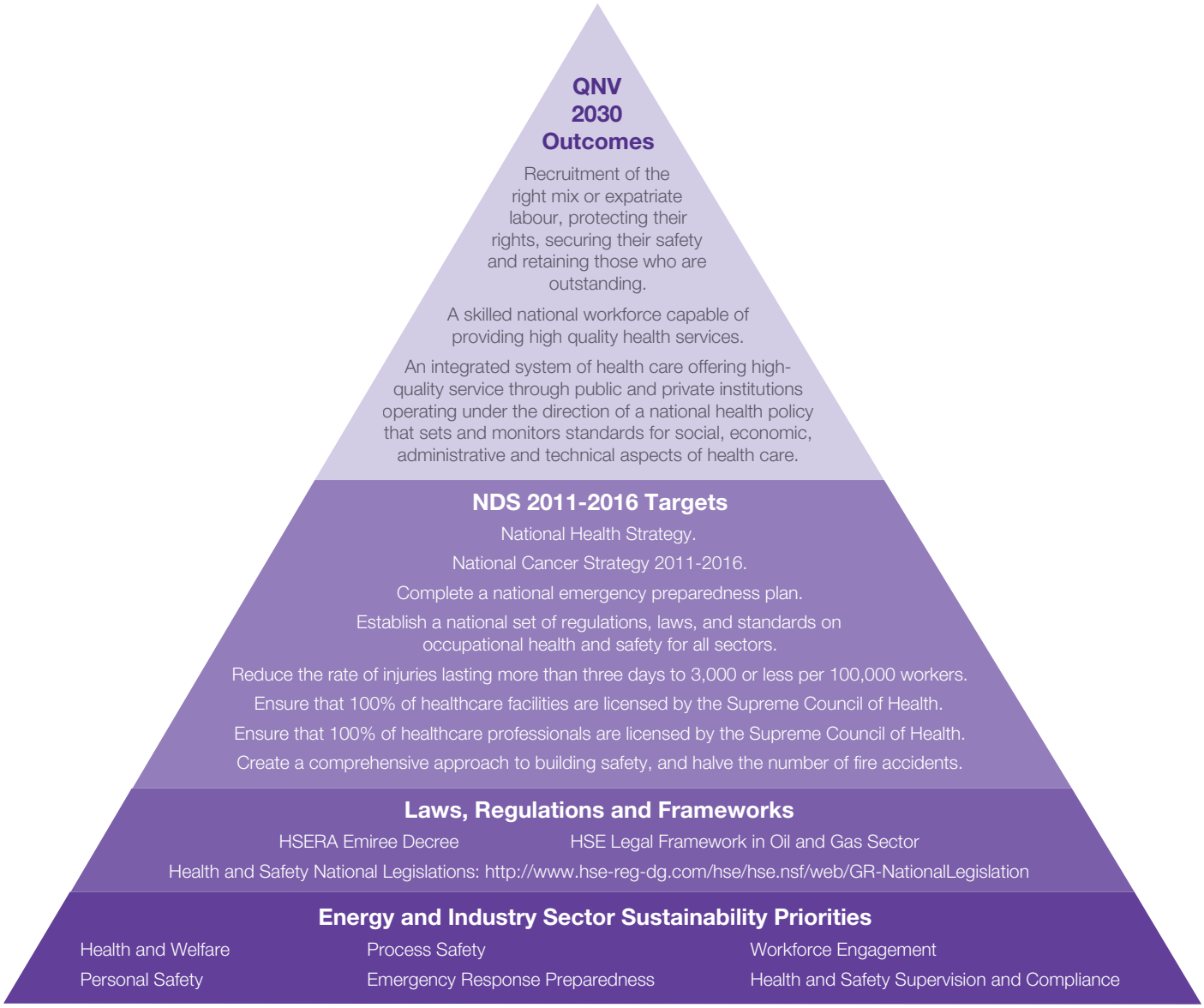
To continue advancing the progress made in 2013, the following goals and improvements have been committed to for 2014-15.

Programme Goals
100% reporting achieved on all relevant indicators – up from 85% in 2013.
75% of data is assured – up from 44% in 2013.
75% of companies release a public sustainability report – up from 50% in 2013.
100% of companies produce and submit a five-year sustainability strategy/plan, including performance targets and projections.
Develop a draft sector-wide sustainability strategy for consultation with the sector, based on the company five-year plans.
Formalise a multi-stakeholder engagement process for policy review, recommendations and formation.

Programme Improvements
Review and update the sector sustainability reporting guidance with a focus on providing definitions for all 42 SDIR performance indicators.
Produce guidance for reporting on social responsibility and workforce issues.
Provide feedback to all companies on their programme participation – highlighting gaps in reporting on the relevant indicators. This may include a board presentation.
Launch the online Energy and Industry Sector Sustainability Data Management System (SDMS).
Launch the SDMS Minister's portal.
Provide all companies with a benchmarking report to prompt individual benchmarking of performance using the SDMS.
Host workshops for companies in the sector to share best practice.
Increase communication of sustainability messages from this report to all stakeholders, particularly to full-employees and the tens of thousands of contractors.
Explore opportunities to engage with other relevant national authorities in Qatar to replicate the programme, as well as policy development.

HEALTH AND SAFETY

Personal Safety | Health and Welfare | Process Safety | Emergency Response Preparedness | Workforce Engagement | Audits, Inspections, Supervision and Compliance



2013 Achievements

13%
reduction in employee occupational illness rates

16%
reduction in contractor LTIR and TRIR

16%
decrease in loss of containment incidents

HEALTH AND SAFETY CONTEXT

Management of health and safety is a priority not only for legal and compliance concerns, but because companies have a moral and social responsibility to protect the safety and well-being of their personnel and the community at large. Effective health and safety management prevents losses and minimise costs on employers by maintaining reliable production operations, reducing rehabilitation costs, cost for curative services, compensatory damages, and avoiding fines.

Activities across the energy and industry sector can pose major hazards due to the nature of the operations being carried out and the potential effects of exposure to the dangerous substances that are being processed, produced, transported and stored in facilities and installations.

National Context

Qatar's commitment to the health, welfare and safety of all its residents has been set out in the Qatar National Vision (QNV) 2030 and supported with clear direction in the National Development Strategy (NDS) 2011-2016. Health and welfare are also captured in the National Health Strategy 2011-2016 and the National Cancer Strategy.

The cooperation and engagement of regulators, authorities, companies, service providers and the community are all necessary for the achievement of positive health and safety results. Interaction and joint effort between the sector, several regulatory bodies and government authorities seeks to minimise health and safety risks and safeguard employee health, safety and welfare.

The Supreme Council of Health (SCH), the Ministry of Labour (MoL), the Ministry of Business and Trade and QP Ports, the Ministry of Environment (MoE) and the HSE Regulations and Enforcement Directorate (DG), support the sector in various ways, including:

- Implementing relevant laws and regulations.
- Participating in task forces and working groups.
- Coordinating committees, workshops and training.
- Investigating major incidents and outbreaks.

DG is the regulatory entity in the energy and industry sector with primary responsibility for health and safety matters, overseeing and assuring the implementation of national legislation, policies, strategies and guidelines. DG also develops specific HSE guidance and administrative measures and monitors implementation and compliance.

The Sector's Health and Safety Management Approach

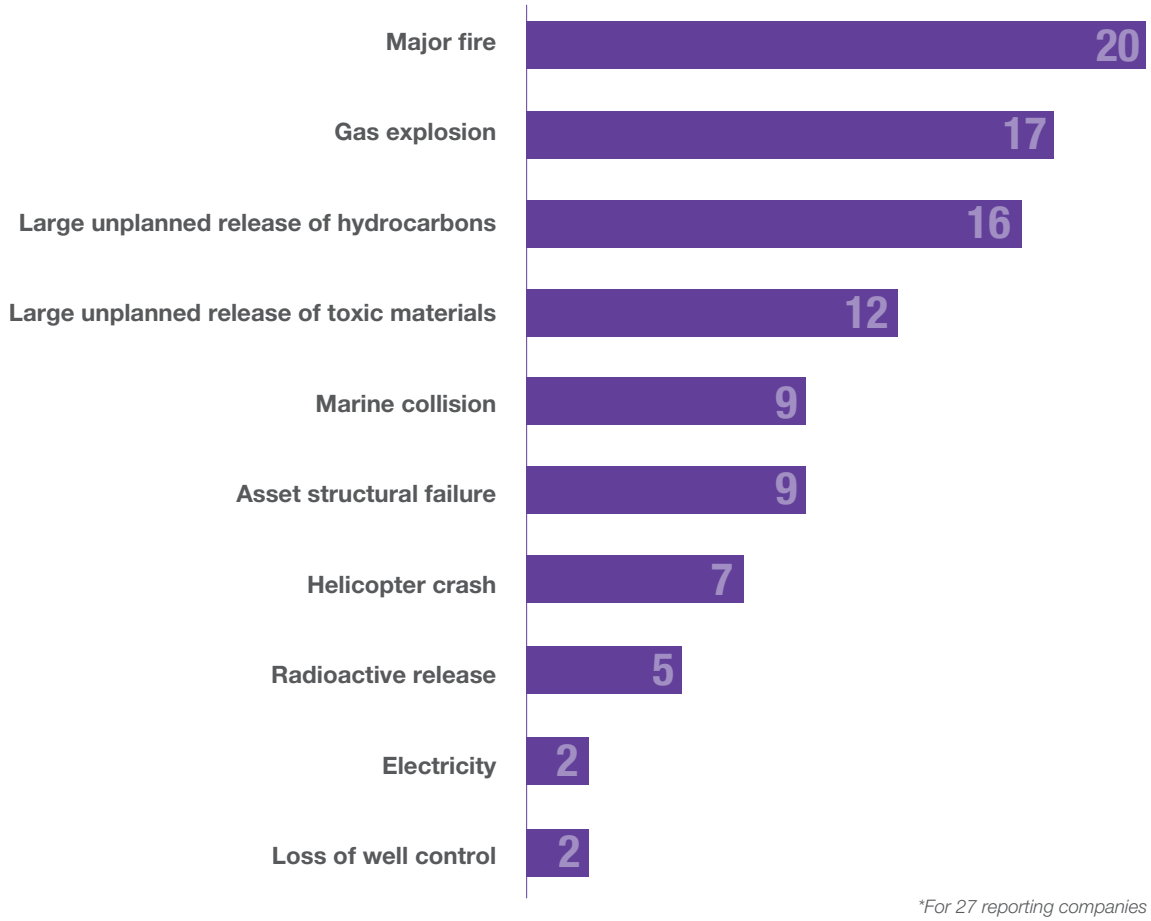
Efforts to manage health and safety in the energy and industry sector focus on protecting the workforce as well as the sector's physical assets. Ensuring safe operations is also a broader responsibility because of the potential impact of operations on the health and safety of the public at large, and national economic and social development. The sector is committed to the goals of the QNV 2030 and NDS 2011-2016, in which safety and welfare are an important feature.

The sector's health and safety objectives and approach are focused on minimizing incidents and achieving zero injuries and fatalities for employees and contractors.

Successful management of safety and health is founded upon understanding the risks involved in carrying out industrial activities. In 2013, as part of the sector sustainability programme, participants were asked to provide information on their risk registers. Of 36 companies, 27 reported having an up-to-date risk register in place. The risks and hazards most frequently mentioned are shown in the graph below.

Main 10 Risks and Hazards

(Number of companies for whom the hazard is material)



*For 27 reporting companies

Risks related to health, such as outbreaks of communicable diseases or heat waves, were identified as lower impact. Process safety risks were ranked high due to the likelihood of a process safety incident having far greater consequences, in terms of its impact on people, business assets, the environment, corporate reputation, security and the economy.

Heath and Safety Guidance for the Sector

The sector's 'Framework for Management of Major Accident Hazards' is under development and once complete will become a basis for managing the risks inherent in the sector. The framework is currently pending final revision and approval, and is expected to be launched in 2014. Its objectives are to:

- Regulate the industry so that major accident hazard (MAH) risks are reduced to a level As Low as Reasonably Practicable (ALARP) by demonstrable application of MAH management.
- Prevent the occurrence of major accidents.
- Minimise the consequence of major accidents.
- Set requirements for MAH reporting, submission and acceptance.
- Strengthen Qatar's preparedness and capacity to respond to potential major emergencies.

In 2013, DG released its 'Guidelines for Heat Stress Management in the Oil and Gas Sector'. Its goal is to provide guidance for the sector on heat stress management in order to prevent heat stress cases, illnesses, accidents and loss of life. It should serve as a baseline for operators to establish heat stress management procedures in line with national legislation. It also aims to provide guidance for identifying, classifying, reporting, investigating and mitigating heat stress cases.

A number of other guidelines have been developed in consultation with the sector, including:

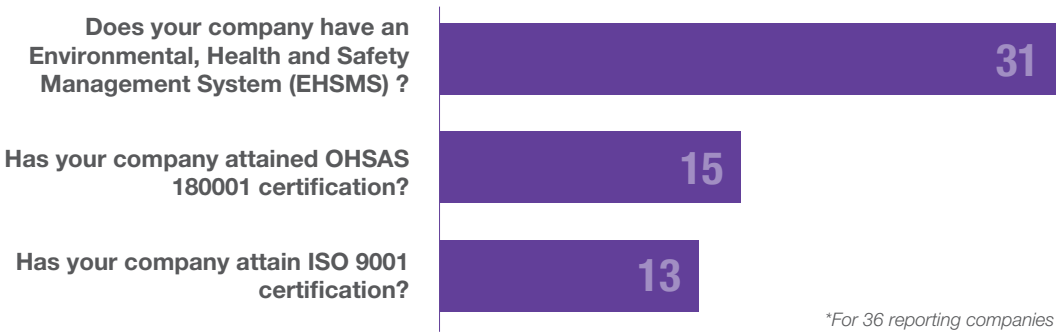
- Guidelines for reporting HSE metrics by operators to the Directorate (DG).
- Guideline for HSE management in contracts.
- Guideline for reporting major accidents by the oil and gas industry.
- Procedure for operator risk ranking.
- Guideline for MAH report preparation.
- Guidelines for emergency preparedness in the oil and gas sector.
- Guideline on emergency exercise and mutual aid in oil and gas sector.

In addition, 'Hazard Identification (HAZID) and Risk Assessment Guideline' and the 'Health Risk Assessment Guideline' are currently under development. All of the guidelines are due to be circulated to the sector in 2014, in an effort to collectively enhance HSE performance and reduce risks to the ALARP level.

Company Management Systems

Companies are continuing to develop and improve management systems to manage health and safety risks. Of 36 companies, 31 reported that they have a specific health and safety management system. Fifteen companies reported that they had a valid occupational health and safety system standard OHSAS 18001 certificate, while thirteen reported having ISO 9001 certification.

Number of Companies with EHSMS



*For 36 reporting companies

Awards

Efforts to improve the health and safety practices and performance are recognized at a national and international level. Awards reported to have been won include the following:

RasGas	QP HSE Excellence Gold Award for waste management.
Qatar Shell	Qatar Petroleum HSE Excellence Award (QP Joint Venture Group) for Qatar Shell's workers' welfare program.
QAFCO	Received Royal Society for the Prevention of Accidents (RoSPA) Silver Award Occupational Health and Safety 2013.
RGPC	Certificate of RoSPA Gold Award for Occupational Health and Safety 2014.
Q Power	Since 2010 RoSPA Gold award in Power and Water sector.
RLPC	Winner of Gold Award from RoSPA.
Q Power	Safety award "Highly Commended" by Middle East Electricity Awards Team (2011 and 2012).
	Winner of Best Power Plant within the region by Middle East Electricity Awards Team (2011, 2012 and 2013).
RLPC	Winner of Middle East Electricity Awards for Best HSE Project / Initiative, held at Dubai.
Qatar Shell	Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC): Best Gas and Oil HSE Project or Initiative Award for Qatar Shell's Non-Accidental Death Programme At Pearl GTL.
Qatargas	Silver HSE award for Jetty Boil-Off Gas Recovery Project (JBOG) project safety, health and environmental performance.
Q-Chem	Named by Chevron Phillips Chemical Company as the winner of the 2013 Summer of Safety Award in the Large Facility category.

2012 Award Winners

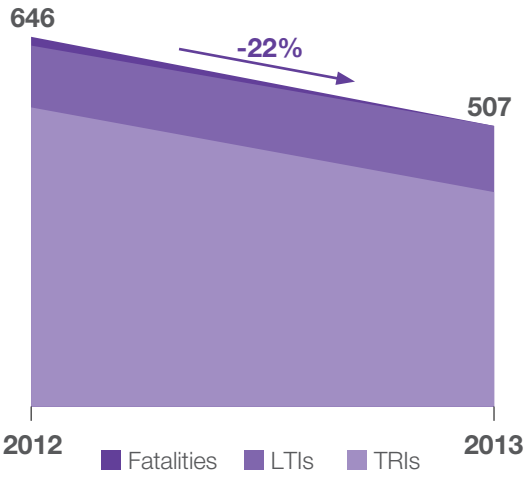
PERSONAL SAFETY

Given the sector's complex interdependent technical systems, and day-to-day operations, personal safety risks are inherent. The safety of people in the energy and industry sector is a top priority, and operating companies strive to achieve zero lost time injuries (LTI) and fatalities.

In 2013, the sector recorded more than 90 million employee work-hours and 266 million contractor work hours in which there were a total of 529 recordable personal safety incidents. For the 30 companies that reported complete data for 2012 and 2013, there was a 22% reduction in the number of recordable incidents across the sector (from 646 to 507). Using the figures provided by each company, the sector's safety performance in rates is presented in this chapter, as opposed to simple averages as provided in the 2012 report.

The Sector's Safety Incidents Snapshot

Number of Incidents



Incident Triangle in 2013

**For 30 comparable companies reporting in 2012 and 2013.*

Employee and Contractor Fatalities

The sector recorded zero employee fatalities in 2013, down from three fatalities in 2012. All 36 companies provided data on their employee fatalities in 2013.

Though contractor fatalities reduced from nine in 2012, regrettably, one contractor fatality was recorded in 2013, among the 32 companies that reported this indicator.

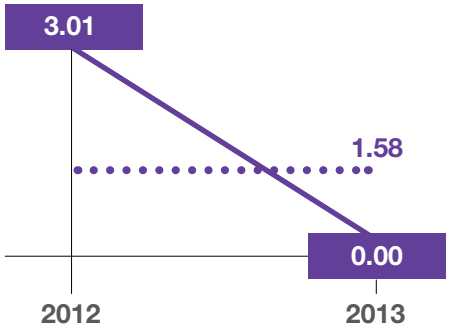
**Contractor fatalities for 31, 32 and 32 companies reporting in 2011, 2012 and 2013 respectively.*
***Employee fatalities for 34, 36 and 36 companies reporting in 2011, 2012 and 2013 respectively.*

Energy and Industry Sector's 'Fatality Rate (FAR)' against the International Association of Oil and Gas Producers (OGP)

The sector benchmarks its health and safety performance to compare performance so that it can develop best practice and improve its systems and procedures. OGP data for 2012 has been used as the benchmark. 2013 data was not available at the time of printing.

FAR - Employees

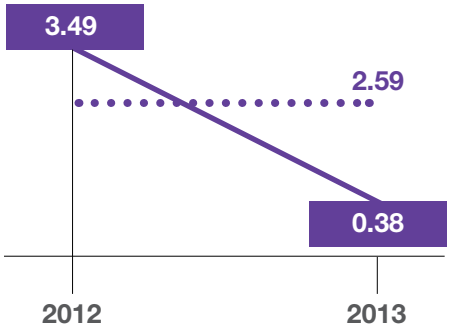
Per hundred million work-hours



**SDIR rate calculated on the basis of 35 reporting companies in 2012 and 2013*

FAR - Contractors

Per hundred million work-hours



**SDIR rate calculated on the basis of 30 reporting companies in 2012 and 2013*

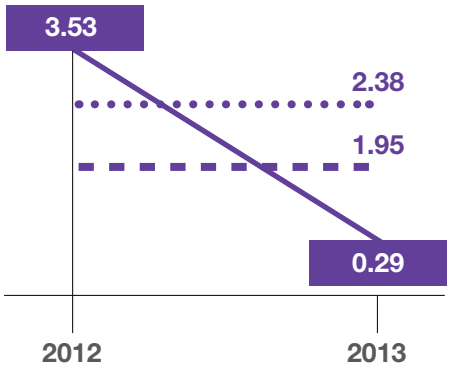
SDIR Reporters

OGP 2012 Benchmark

The sector's combined employee and contractor FAR was 0.29 in 2013, a significant reduction on 2012. This is well below the OGP combined employee and contractor FAR in 2012 of 2.38, and the OGP Middle East employee and contractor FAR in 2012 of 1.95.

FAR - Employees & Contractors

Per hundred million work-hours



SDIR Reporters

OGP 2012 Benchmark Middle East

OGP 2012 Benchmark All Regions

** SDIR rate calculated on the basis of 30 reporting companies in 2012 and 2013*
*** FAR is calculated per 100 million work-hours completed – following the OGP methodology.*
**** FAR could not be calculated for some companies because they did not report their work-hours completed.*

Case Study: RasGas - Responding to the road fatality in 2012

RasGas took extensive action in response to a road traffic accident in Ras Laffan in 2012 in which a contractor was killed. Immediately after the accident, RasGas carried out a detailed investigation, with the goal of making sure that a similar incident never happens again.

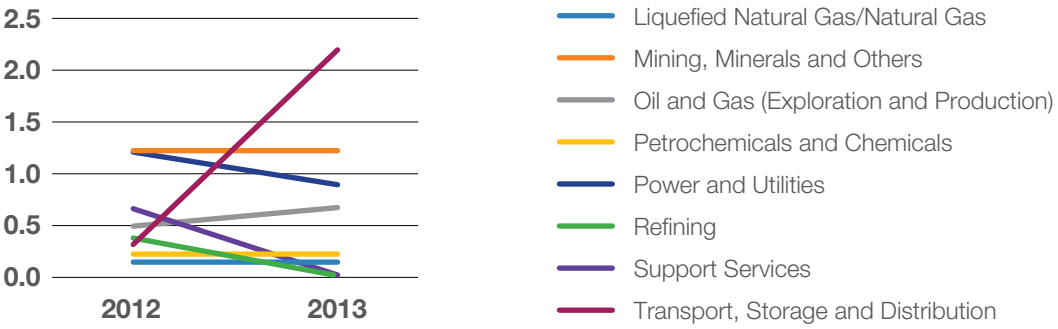
Following the investigation, RasGas responded with increased education on road safety, introducing a 'driving for excellence' programme. They also extended the use of in-vehicle monitoring systems in employee and contractor vehicles, increased enforcement of site speed limits and conducted a site-wide traffic engineering study to identify road layout improvement opportunities.

Employee and Contractor Lost-Time Injury Rate (LTIR)

In 2013, 34 of the 36 companies (94% of the sector) reported the number of employee lost-time injuries and total employee work-hours completed. Employee LTIR (per million work-hours completed) for the sector increased to 0.65 in 2013, compared to 0.53 in 2012. Analysis of subsector performance indicates that the increase can be primarily attributed to the transport, storage and distribution subsector which experienced a significant increase in lost time incidents in 2013, for the two companies that reported their performance from this subsector.

LTIR - Employees (by subsector)

Per million work-hours

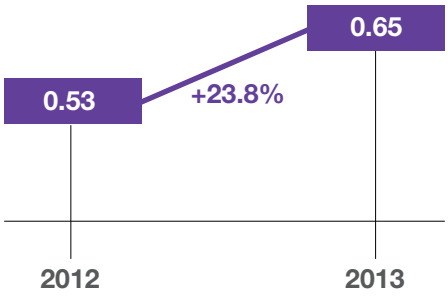


**For 34 comparable companies reporting in both 2012 and 2013*

HE Dr. Mohammed bin Saleh Al Sada during the RasGas 100 Million Manhours without LTI event

LTIR - Employees

Per million work-hours



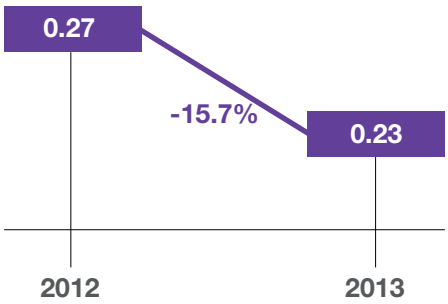
**For 34 comparable companies reporting in both 2012 and 2013*

Three subsectors reported improved employee LTIR in 2013, including the power and utilities, refining, and support services subsectors. The support services and refining subsector achieved zero incidents. The remaining subsectors reported roughly the same employee LTIR in 2012 and 2013, with oil and gas experiencing a 40% increase.

For contractors, 30 companies (83% of the sector) reported the number of lost time injuries and total work-hours in 2013. The contractor LTIR (measured per million work-hours) for the sector was 0.23 in 2013, a 16% decrease from 0.27 in 2012, despite a significant increase in lost time in the transport storage and distribution subsector. This represents an encouraging trend and may reflect the more extensive levels of engagement with contractors on safety issues that has been reported in recent years.

LTIR - Contractors

Per million work-hours

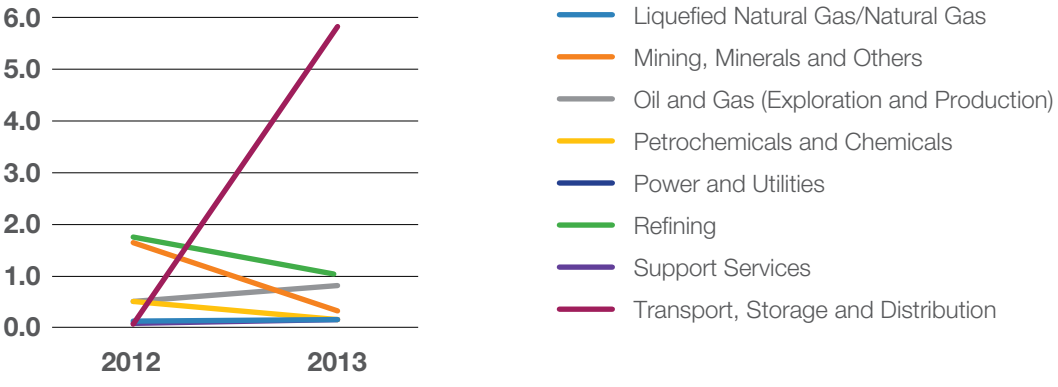


**For 30 comparable companies reporting in both 2012 and 2013*

Two subsectors, refining and support services, managed to achieve zero contractor LTIR in 2013. Five subsectors improved their performance from 2012 to 2013, with mining, minerals and others, power and utilities, and petrochemicals and chemicals all recording a 50% improvement. Two subsectors (oil and gas and transport, storage and distribution) recorded declined performance for this indicator.

LTIR - Contractors (by subsector)

Per million work-hours



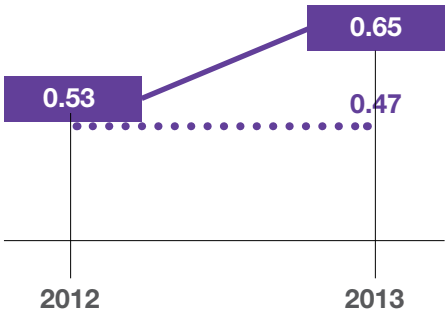
**For 30 comparable companies reporting in both 2012 and 2013*

Energy and Industry Sector's 'Employee LTIR and Contractor LTIR' against the International Association of Oil and Gas Producers (OGP)

In comparison to the 2012 OGP benchmark, the sector LTIR for employees shows room for improvement, while the sector LTIR for contractors is significantly better than the OGP benchmark.

LTIR - Employees

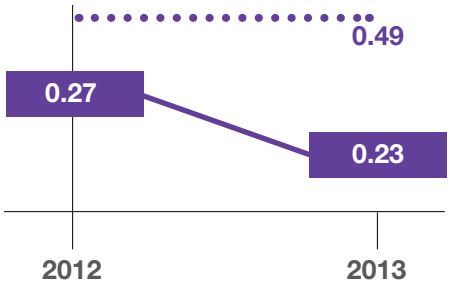
Per million work-hours



**SDIR rate calculated on the weighted basis of 34 reporting companies in 2012 and 2013*

LTIR - Contractors

Per million work-hours



**SDIR rate calculated on the weighted basis of 30 reporting companies in 2012 and 2013*

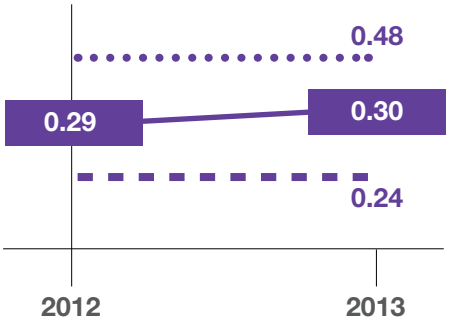
SDIR Reporters

OGP 2012 Benchmark

The sector's combined employee and contractor LTIR for 2012 and 2013 is better than the 2012 OGP benchmark for all regions, but narrowly above the 2012 OGP benchmark for the Middle East.

LTIR - Employees & Contractors

Per million work-hours



SDIR Reporters

OGP 2012 Benchmark Middle East

OGP 2012 Benchmark All Regions

** SDIR rate calculated on the weighted basis of 30 reporting companies in 2012 and 2013*

Case Study: ORYX GTL – An exemplary shutdown

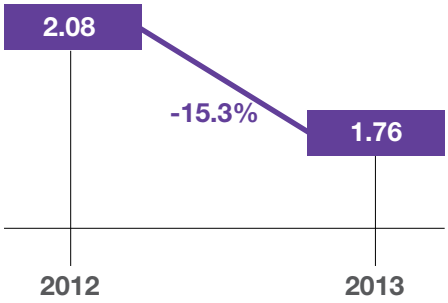
ORYX GTL successfully completed a third major shutdown in 2013 without a recordable injury. The 2013 shutdown was the most comprehensive in the company's history. Although six minor injuries required minor first aid treatment, the ORYX GTL team was proud of the fact that no recordable accidents or serious incidents occurred during the shutdown. This continual effort supports ORYX GTL's intent to put safety at the top of everyone's daily agenda.

Employee and Contractor Total Recordable Injury Rate (TRIR)

The sector's employee Total Recordable Injury Rate (TRIR measured per million hours worked) improved by 15% in 2013, down to 1.76, from 2.08 in 2012. In total, 34 companies reported comparable data for 2012 and 2013.

TRIR - Employees

Per million work-hours



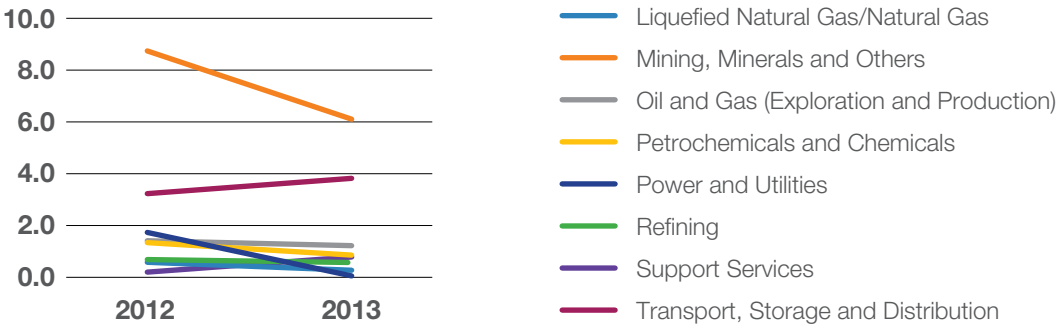
**For 34 comparable companies reporting in both 2012 and 2013*

At subsector level, the support services subsector was the only one that achieved zero employee TRIR in 2013 – although it should be noted that it is a relatively small subsector compared to others and typically undertakes lower-risk activities. At the same time, the following five subsectors reported improved employee TRIR in 2013:

- Liquefied Natural Gas/Natural Gas: **79% improvement**
- Mining, Minerals and Other: **29% improvement**
- Oil and Gas (E&P): **9% improvement**
- Petrochemicals and Chemicals: **30% improvement**
- Power and Utilities: **75% improvement**

TRIR - Employees (by subsector)

Per million work-hours

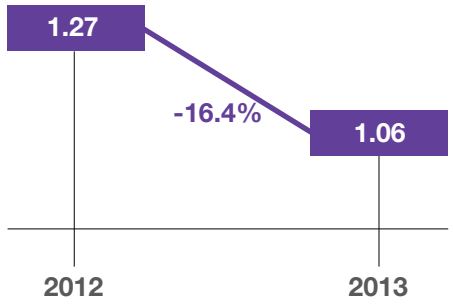


**For 34 comparable companies reporting in both 2012 and 2013*

Contractor recordable injuries and work-hours were reported by 30 companies, or 83% of the sector, in 2012 and 2013. The sector's contractor TRIR (per million work-hours) in 2013 was 1.06, down from 1.27 in 2012, a 16.5% improvement. This was achieved despite a significant number of incidents recorded by the transport, storage and distribution subsector in comparison to its work-hours completed.

TRIR - Contractor

Per million work-hours

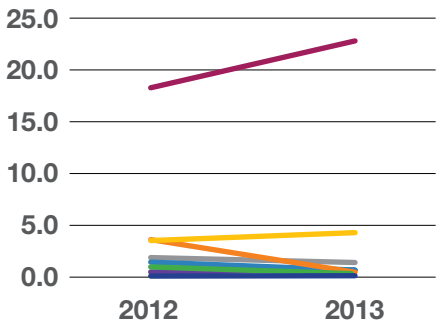


**For 30 comparable companies reporting in both 2012 and 2013*

At subsector level, support services achieved zero contractor TRIR in 2013. Three subsectors reported improved results for contractor TRIR (mining, minerals and others, power and utilities, and refining), while all other subsectors recorded slight declines in contractor TRIR performance in 2013.

TRIR - Contractors (by subsector)

Per million work-hours



**For 30 comparable companies reporting in both 2012 and 2013*

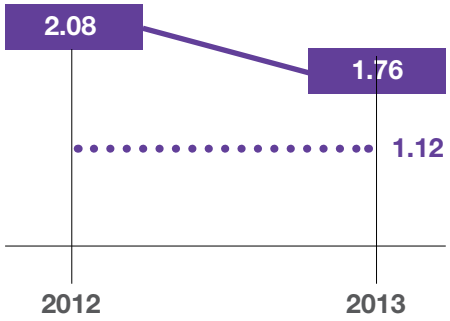
- Liquefied Natural Gas/Natural Gas
- Mining, Minerals and Others
- Oil and Gas (Exploration and Production)
- Petrochemicals and Chemicals
- Power and Utilities
- Refining
- Support Services
- Transport, Storage and Distribution

Energy and Industry Sector's 'Employee TRIR and Contractor TRIR' against the International Association of Oil and Gas Producers (OGP)

In comparison to the 2012 OGP data, the sector continues to perform below the benchmark for employee TRIR despite a 16% improvement in performance. For contractor TRIR, the sector continues to perform better than the OGP benchmark.

TRIR - Employees

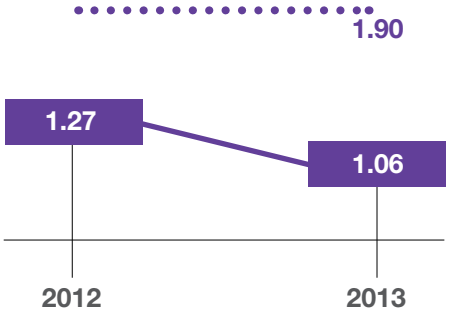
Per million work-hours



**SDIR rate calculated on the weighted basis of 34 reporting companies in 2012 and 2013*

TRIR - Contractors

Per million work-hours



**SDIR rate calculated on the weighted basis of 30 reporting companies in 2012 and 2013*

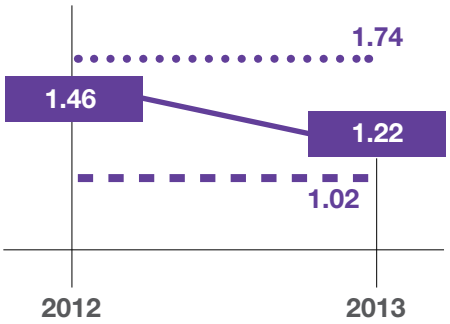
SDIR Reporters

OGP 2012 Benchmark

The sector's combined employee and contractor TRIR in 2012 and 2013 is lower than the 2012 OGP combined TRIR, but higher than the 2012 OGP Middle East combined TRIR.

TRIR - Employees & Contractors

Per million work-hours



SDIR Reporters

OGP 2012 Benchmark Middle East

OGP 2012 Benchmark All Regions

** SDIR rate calculated on the weighted basis of 30 reporting companies in 2012 and 2013*

Case Study: Oxy - "What-If?" Behaviour-Based Safety Programme

Oxy's "What-If?" Behaviour-Based Safety Programme is a mechanism by which employees and contractors can recognize and reinforce safe behaviours and, where needed, intervene when unsafe behaviours are observed. The process initiates immediate positive communication between the observer and the personnel performing the task. This communication provides the necessary feedback to ensure Oxy Qatar's safety expectations are reinforced. Since its inception, the "What-If?" programme has seen the number of observations increase by more than 150 percent. In Oxy's view, the increase strongly correlates to their decreasing injury and illness incidence rate and is one of the reasons Oxy Qatar is closer to achieving an injury-free workplace.

Incident Investigation

Investigation in order to understand the root causes of an incident is a valuable practice that informs reformative actions to prevent recurrence of similar events in the future. It also helps to address control weaknesses that could contribute to other incidents.

Incident Investigation and Action	2010	2011	2012	2013
Incident investigations initiated	1,831	3,799	5,466	4,825
Incident investigations completed	1,684	3,286	4,496	3,906
Actions recommended	1,859	2,492	3,911	3,800
Actions implemented	1,313	1,742	3,010	3,009

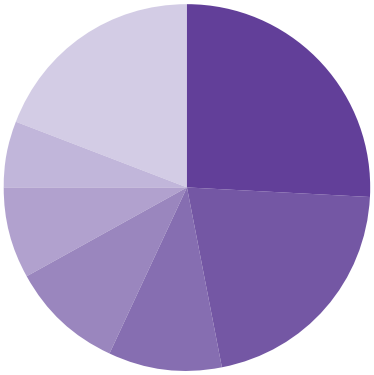
In 2013, the sector initiated 4,825 incident investigations and completed 3,906. The difference between investigations initiated and completed can be attributed partly to some investigations being initiated in December and rolling over into 2014, as well as some companies reporting a backlog in investigations. The difference between actions recommended and implemented occurs for similar reasons.

Incidents by Category and Activity

Incident investigation helps to categorise incidents and classify the activities being performed while incidents occur. For the year 2013, all 36 companies provided breakdowns of incidents by category and activity for employees and contractors. Incidents include fatalities, Lost-Time Injuries (LTI) and Restricted Work Cases (RWC), but exclude Medical Treatment Cases (MTC).

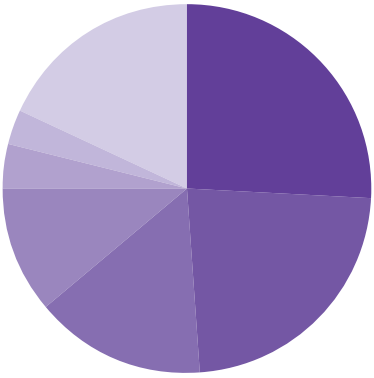
The activities that led to the most incidents were construction (26%) as well as maintenance, inspection and testing (21%). The most common categories of incident were “struck by” (26%) and “caught in, under or between” (23%). This information allows companies within the sector to review safety procedures and launch targeted awareness campaigns that focus on avoiding particular types of incident in the future.

Activity Involved During Incident - 2013



- Construction **26%**
- Maintenance, Inspection, Testing **21%**
- Production Operations **10%**
- Lifting Operations **10%**
- Transport - Land **8%**
- Fuel & Related Products Retailing **6%**
- Others **19%**

Incidents by Major Category - 2013



- Struck By **26%**
- Caught in, under or between **23%**
- Slips and Trips (at the same height) **15%**
- Cut, Puncture Scrap **11%**
- Falls from height **4%**
- Explosion / burn **3%**
- Others **18%**

Case Study: GDI - Potential Matrix Factor

In 2013, Gulf Drilling International (GDI) adopted a new measurement tool called the "Potential Matrix Factor", which takes a proactive approach to measuring safety performance. This is a 'leading' indicator complementing the reactive 'lagging' indicator of TRIR (Total Recordable Incident Rate).

GDI now looks at all incidents and scores them using a "scoring matrix" based on the potential consequence rather than the actual outcome. This allows the company to identify early indicators of potential risks. The potential matrix uses quantification by having each cell "scored" with a numerical potential matrix factor. The value of the Potential Matrix Factor Frequency can be seen when combining it with the traditional measurement of safety performance, as the TRIR may be relatively low when the potential matrix factor indicates there may be problems that require action.

GDI Potential Matrix Factor

Number of People at risk (PROBABILITY)

HAZARD EFFECT		0 A	1 B	2-4 C	5-10 D	11+ E	PERSONAL INJURY**
Minor Occurrence • Equipment damage : up to $3500 • Loss of containment : up to 10 litres • Gas release : up to 0.1 kg • Equipment failure • Smoke	1	10 pts.*	20 pts.	50 pts.	100 pts.	200 pts.	**First Aid Case (FAC)** Examples; minor cut/abrasion, strain, bruise, minor eye injury (foreign body)
Moderate Occurrence • Equipment damage : up to $35,000 • Loss of containment :10-1000 litres • Gas release : 0.1-1.0 kg • Fire	2	50 pts.	100 pts.	250 pts.	500 pts.	1,000 pts.	**Medical Treatment Only (MTO), Restricted Work/Transfer Case (RWTC)** Examples; fracture to finger/ thumb/ toes, burn, severe cut
Major Occurrence • Equipment damage : up to $170,000 • Loss of containment :1000-5000 litres • Gas release : 1.0-5.0 kg • Explosion	3	100 pts.	200 pts.	500 pts.	1,000 pts.	2,000 pts.	**Lost-Time Incident (LTI), hospitalisation, or disabling injury** Examples; broken leg, dislocated shoulder, electric shock, unconsciousness
Extensive Occurrence • Equipment damage : over $170,000 • Loss of containment : over 5000 litres • Gas release : over 5.0 kg • Major explosion	4	500 pts.	1,000 pts.	2,500 pts.	5,000 pts.	10,000 pts.	**Fatality (FTL)**

** Denotes Potential Matrix Factor (PMF) Points*
*** Injury categories as defined by IADC (International Association of Drilling Contractors) - Incident Statistics Programme (ISP)*

Safety Milestones Achieved

A number of companies reached significant health and safety milestones in 2013. The milestones reported include:

RasGas	RasGas Venture achieved 100 million hours without a lost-time incident, surpassing all previous performance in the State of Qatar.
	Operation Projects Department celebrated 20 million work-hours without an LTI.
	Subsurface achieved 19 million work-hours and completed six years without an LTI.
Qatargas	20 million safe work hours for the jetty boil-off gas recovery project.
Qatar Shell	22 million hours without an LTI - the last injury happened in May 2012.
ORYX GTL	Maintaining a total recordable injury rate of 0.0 for two consecutive years, while completing 16,865,136 work-hours LTI free.
QVC	6 million safe work-hours without an LTI.
SEEF	4 million safe work-hours.
QAFAC	3 million work-hours without lost-time accident for staff and contractors.
RGPC	3 million safe work-hours.
QPD	2 million work-hours without an LTI.
RLPC	1 million work-hours without an LTI for employees, by January 2013.
	7 years without an LTI for employees and contractors in August 2013.

HEALTH AND WELFARE

Health risks in the energy and industry sector arise because of the routine handling of hydrocarbons and other chemicals, the hazardous work environment (including offshore work), and potential exposure to other hazards such as noise and radiation. In Qatar, these factors are accompanied by extreme temperatures, wind, dust and humidity.

The sector, represented by the operators and other stakeholders concerned with health and welfare, including DG, SCH, MoL, Hamad Medical Corporation (HMC), Primary Health Care Corporation (PHCC), Private Providers and QP, have put a major focus on health and welfare issues in line with the national health priorities of:

- Access to health care.
- Communicable diseases.
- Heat stress.
- Food safety and outbreaks investigation.
- Supervision and audits of the operators.

"The main focus in occupational health is on three different objectives: (i) the maintenance and promotion of workers' health and working capacity; (ii) the improvement of working environments and work to become conducive to safety and health and (iii) development of work organisations and working cultures in a direction which supports health and safety at work and in doing so also promotes a positive social climate and smooth operation and may enhance productivity of the undertakings. The concept of working culture is intended in this context to mean a reflection of the essential value systems adopted by the undertaking concerned. Such a culture is reflected in practice in the managerial systems, personnel policy, principles for participation, training policies and quality management of the undertaking."

Joint ILO/WHO Committee on Occupational Health

National Health and Welfare Updates

Issues such as communicable diseases and food safety are important to the sector given the large number of workers employed and the close contact between them in their workplace or accommodation. Maintaining health and welfare is also a national priority.

A range of initiatives have been implemented in 2013 which have an impact on how companies in the sector manage health and well-being. These include:

- **Industry Health Advisors Forum (IHAF):** The aim of the forum was to update the sector's HSE managers, health advisors and industrial hygienists on the current issues relating to health and healthcare within the sector in order to achieve synergy, cooperation and compliance with state legal requirements and sector best HSE practices. The presentations and discussions included topics such as International Health Regulations (IHR) 2005 update, MERS CoV, workplace wellness plans, psychosocial welfare, healthcare licensing and accreditation, occupational health subjects, quality improvement methodologies and success stories.
- **International Health Regulations (IHR 2005):** DG and sector representatives sit on the technical task teams for food safety, communicable diseases, chemical disaster, nuclear issues and radiology and report back to the National IHR committee.
- **National IHR Committee:** A National Advocacy Session was organized by the SCH in October 2013. The first part of the session focused on general IHR 2005 requirements at a national level, and the second focused on technical issues related to chemical, biological, radiological and nuclear (CBRN) management.
- **National Pandemic Preparedness Symposium:** SCH, in collaboration with DG, QP and HMC, conducted a National Pandemic Preparedness symposium in June 2013. The pandemic planning taskforce team was reactivated and the Pandemic Planning Guidelines and the assessment tool were shared with the industry again in 2013.

MERS (coronavirus)

In 2013, an industry level pandemic planning taskforce was reactivated to monitor MERS CoV (Middle East Respiratory Syndrome coronavirus). It held two meetings which covered subjects relating to the virus. In 2014, DG aims to hold a MERS COV symposium to update all health focal points and implement the WHO and SCH recommendations.

Employee Occupational Illness Rate

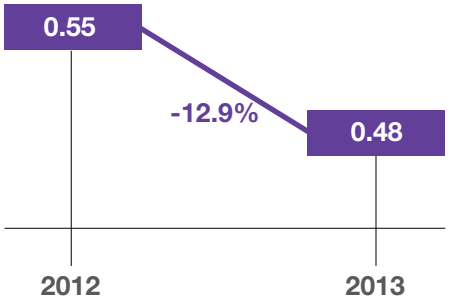
Occupational illness rate is calculated by comparing employee illness-related absences against planned working time, within a specific period. Illness rates provide an insight into working conditions, the implementation of health policies, and workload.

For the 31 companies that reported comparable data on employee occupational illness (per million work-hours), the sector's performance in 2013 was 0.48, compared to 0.55 in 2012, a 13% improvement.

On a subsector level, three subsectors recorded zero employee occupational illness rates in 2013 (power and utilities, support services, and transport, storage and distribution), while two subsectors recorded improved performance. Three subsectors reported declined performance in comparison to 2012.

Occupational Illness Rate - Employees

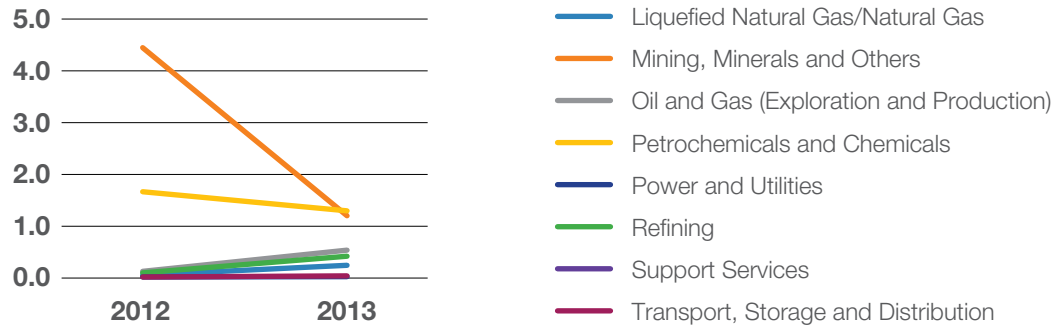
Per million work-hours



**For 31 comparable companies reporting in both 2012 and 2013*

Occupational Illness Rate - Employees (by subsector)

Per million work-hours



**For 31 comparable companies reporting in both 2012 and 2013*

Case Study:
Clean Canteen Campaign

In 2013, DG in collaboration with the Supreme Council of Health - Department of Public Health, QP Departments, and Amwaj Catering, initiated the Clean Canteen Campaign. The campaign's main goal is to assure the health and welfare of the workforce by providing safe and healthy food through:

- Effective cascading of information, and requirements.
- Increasing awareness among companies, municipalities, contractors, and catering contractors about the importance of safe and healthy food.
- Assuring compliance with state legal, DG, and industrial cities requirements.

Another aspect of the campaign will look at the provision of healthy food as a baseline for worker fitness, with a view to decreasing obesity, responding to hypertension and providing proper healthcare for these chronic conditions.

Case Study:
OxyHealth Programme

Oxy Qatar offers gym subsidies, health screening, personalized nutrition advice, weight management and smoking cessation programmes to assist employees and their families in maintaining healthy lifestyles. In addition, Oxy Qatar has monthly health and wellness campaigns that seek to educate employees on illness prevention. Past campaigns have included breast cancer awareness, prostate cancer awareness, heart health and diabetes healthcare. In addition to the resources available to its personnel, Oxy Qatar partners with local organisations to promote community and public health.

Case Study:
Qatargas Risk Monitoring and Inspection

Qatargas monitors an extensive range of workplace health risks through its Occupational Risk Monitoring programme. In 2013, all 84 planned risk monitoring assessments were completed, covering topics such as noise, radiation, air quality and ergonomics.

A total of 149 food safety inspections were conducted, including four at each contractor worker camp. Contractors working for Qatargas are required to adhere to clear and stringent standards for medical, food and camp services for their workers.

Other topics covered by the risk monitoring programme included periodic audiometric tests conducted on employees working in high noise areas, workplace or personal exposure monitoring, occupational health hazard identification, evaluation and controls, health risk assessment, PPE (personal protective equipment) evaluation and maintenance, counselling and medical surveillance.

Case Study:
"Your health IS your wealth. Play Sport!!" – QAFAC's Sports Committee

The QAFAC Sports Committee was set up by the General Manager in 2013. It aims to promote team and individual sports within the company, under the banner of "Your health IS your wealth. Play Sport!!" Experience shows that employees and their families are keen to take advantage of the sporting opportunities on offer.

During 2013, the Sports Committee organized internal and external events for individuals and teams in basketball, badminton, volleyball and cricket. Links with a Doha school and a sister company in Mesaieed have been established to share facilities. The Sports Committee is at the forefront of sports and activities on National Sports Day.

Case Study:
Qatar Petroleum (QP) Health Promotion Unit

The health promotion unit leads the Medical Services (MS) health promotion committee, and coordinates with QP MS locations with regard to health promotion activities and events. In 2013, the health promotion team conducted several health events and programmes.

Health Events

Marking the occasion of World Hypertension Day and World Anti-Smoking Day, QP held a major health awareness event for its employees and family members. Games and interactive sessions were held with attractive prizes and give-away items. As part of the event, body mass index (BMI), heart health and lung function checks were held at the health stations set up at the venue.

The health promotion team conducted more than 20 other events in 2013, including:

- A Mental Health Programme, conducted in Mesaieed Industrial City for more than 60 QP staff.
- Health Screening and Advice during National Sports Day, for more than 200 QP staff and families.
- Office Ergonomics Stretching and Exercise slides for all QP staff.
- 'The Challenge' Health Promotion Event in association with Weill Cornell Medical College in Qatar.
- A health promotion booth for Qatar University health students.
- Active participation in international health days such as, World Blood Donor Day, World Heart Day, World Mental Health Day, World Cancer Day World Diabetes Day, and World Aids Day.

In 2013, the health promotion team also implemented several health programmes including:

- A 'Weight Management Clinic' initiative for the early recognition, evaluation, and treatment of weight challenges and obesity, which directly and indirectly contribute to increased health and safety risks.
- A 'Travel Clinic' initiative providing pre-travel advice to help QP travellers stay healthy and well while abroad.
- The 'Al-Shifa Health and Wellness Newsletter', a monthly newsletter in Arabic and English, in addition to the development of two waiting area videos.

Heat Stress Events

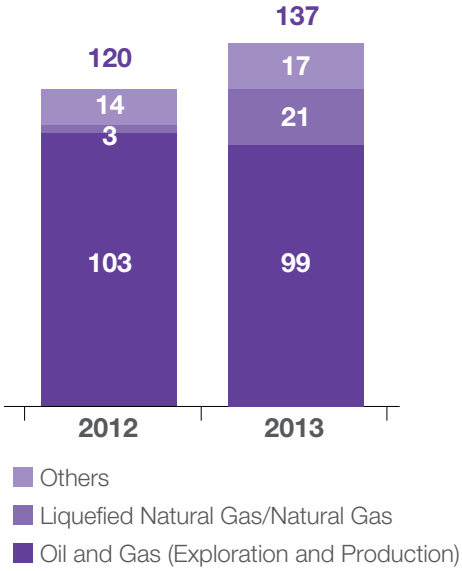
Workers exposed to extreme heat or long periods of work in hot environments may be at risk of heat stress - which can result in heat stroke, exhaustion, cramps, or rashes. Extreme heat can also increase the risk of injury as it can result in conditions such as dizziness.

In 2013, a Heat Stress Management Guideline was signed and made available on the DG website. It is designed to guide companies on preventing heat stress cases, illness, incidents and loss of life. It provides a baseline for operators to establish heat stress management procedures, in line with guidance and State of Qatar legislation.

Heat stress events resulting in medical attention were reported by 31 companies in 2013, 86% of the sector. The total number of reported heat stress events in the year was 137, an increase of 14.2% from 2012. The increase reflects a number of factors, including the implementation of major projects that required significant increases in the size of the workforce, and a higher number of hours worked including working in hot periods. Improved awareness and tracking has also contributed to the higher level of reported cases.

The support services subsector was the only subsector that reported zero heat stress events in 2013. It should be noted that this is a smaller subsector than others and is not typically engaged in outdoor or process-related operations in which heat stress is a particular risk. The oil and gas (exploration and production) subsector reported 72% of the heat stress events in 2013, despite only reporting one quarter of the full sector's total work-hours. On the other hand, the LNG/NG subsector, which represented 45% of the total work hours, reported only 21 incidents, a significant increase over 2012. Three subsectors reported improved or similar performance compared to 2012 (mining, minerals and others, oil and gas, and refining), while four subsectors reported increased heat stress events - LNG/NG, petrochemicals, power and utilities, and transport, storage and distribution.

Heat Stress Incidents



**For 31 comparable companies reporting in 2012 and 2013.*

Sector Occupational Health Workshop – Focused on Heat Stress

In May 2013, DG, in collaboration with the Occupational Health Division of QP's Medical Services Department, and the HSE Department of Qatar Petroleum's Industrial Cities Directorate, held an occupational health workshop focused on heat stress.

The workshop, which was held at Mesaieed Industrial City, convened more than 100 occupational health professionals from the sector. Under the theme of "Understanding the Management of Heat Stress in the Industrial Cities Directorate," the workshop covered the latest approaches to managing heat stress in the sector and in promoting professional knowledge and skills related to this condition.

Case Study: Q-Chem summer safety programme and Chevron Phillips Award

Q-Chem conducts a heat safety campaign every year between May and November in order to reduce the risks associated with the severe temperature and humid conditions typical during these months. Training, workforce rest periods, and monitoring of environmental factors are key components of the company's Summer of Safety Campaign. For seven consecutive years, Q-Chem has achieved zero heat stress events.

Sector Compliance with Health Requirements

Ensuring the energy and industry sector's compliance with health requirements includes checking the compliance of healthcare facilities and workers as well as the responses by companies to health incidents and emergency cases.

DG collaborates with SCH to achieve higher compliance rates through better communication, improved collaboration, and efficient and effective inspections. In 2013, DG in collaboration with SCH and the Health Care Quality Management and Patient Safety Department, hosted a healthcare licensing workshop for the sector. Throughout the year, a total of 37 events took place related to the licensing of healthcare facilities and healthcare workers. The events included a licensing related meeting with SCH, meetings with healthcare facilities, pre-inspections conducted by DG, and five inspections conducted jointly by DG and SCH. An overview of the total number of healthcare facilities and their licensing status for 2013 is provided below.

Healthcare Facilities

Location	Number Facilities	Licensed	Under process with SCH
Doha	13	9	4
Dukhan	20	4	16
Ras Laffan	55	27	28
Mesaieed	22	12	10
Total	**110**	**52**	**58**

DG is developing healthcare facility licensing guidelines which are in the final stages of approval and will be issued to the sector.

Follow up checks were done for the licensing of healthcare workers in the sector in Doha and other locations. In 2013, 89% of healthcare workers in the sector obtained the SCH license. The table below shows the total number of healthcare workers and their licensing status.

Healthcare Workers

Location	Total Number of Healthcare Workers	SCH Licensed		SCH Licensing Under Process	
		Number	Percentage %	Number	Percentage %
Doha	155	150	97%	5	3%
Dukhan	102	90	88%	12	12%
Ras Laffan	290	256	88%	34	12%
Mesaieed	160	135	84%	25	16%
Total	**707**	**631**	**89%**	**76**	**11%**

Sector healthcare facilities inspected in 2013 are summarised in the table below:

Healthcare Workers				
Location	Status			Total
	Licensed	Final approval for location institution	Provision for location institution	
Ras Laffan	2	3	3	6
Mesaieed	0	0	4	4
Dukhan	2	2	2	4
Doha	0	0	1	1
Total	**4**	**5**	**10**	**15**

To enhance the sector's compliance with health requirements, DG aims to work on the following in 2014:

- Conduct health and healthcare and theme-based inspection of operators' facilities as per an agreed schedule and active surveillance for communicable diseases.
- Liaise with the industry on significant incidents, occupational injuries, and illnesses.
- Liaise with SCH on incidents (such as heat stress illness reporting, food outbreaks) affecting the workforce.
- Continue activities with the International Health Regulations (IHR) Committee and working groups.
- Develop health and healthcare guidelines as per national requirements.
- Collaborate with other regulatory authorities in regulating and monitoring health and healthcare, occupational safety and environment issues.

PROCESS SAFETY

Process based incidents and emergencies in the energy and industry sector have the potential to cause severe harm to the workforce, the community, the environment, company assets, reputation and the financial stability of companies. Risk assessments, emergency preparedness, asset integrity evaluations, timely maintenance, management systems and procedures, and proper recording and investigation / root-cause analysis of incidents and near misses are essential tools for managing the risk of major accidents.

The sector's 'Framework for Management of Major Accident Hazards' is risk-based; recognising that significant risks that could have a State level impact, require regulation. It requires companies in the sector to reduce risk to a level As Low as Reasonably Practicable (ALARP). The framework describes the principles that regulate the industry, designed to ensure that MAH risks are managed and controlled. Two regulations are integral to the framework:

- MAH Report regulation.
- Third-party Certification and Independent Verification regulation.

In addition to the risk reduction tools mentioned above, many companies have well-established systems for accident investigation. The goal, however, is accident prevention, so considerable effort is put into generating and circulating lessons learnt from 'high potential' incidents - that is, incidents that did not have serious consequences, but could have resulted in significant harm or damage had circumstances been slightly different.

Loss of Containment (LOC)

Companies in the energy and industry sector routinely deal with dangerous materials like oil, gases, chemicals, and lubricants. Avoiding releases of these substances from containment is a main safety concern and a key performance indicator for the sector.

The number of LOC incidents in 2012 and 2013 was reported by 31 companies. This covers 94% of the sector, as this indicator is not relevant for the three companies within the support services subsector. There were 298 LOC incidents reported in 2013, a decrease of 16% compared with the 354 incidents reported in 2012.

At the subsector level, the oil and gas (exploration and production) subsector reported 85% of the total LOC incidents, while the petrochemicals subsector reported 11% of the sector's total. The severity of each LOC varies and is currently not reported by all companies. Companies are encouraged to provide additional information on the type and severity of LOCs in their future reporting.

Case Study: ConocoPhillips Qatar - Process Safety Symposium

Texas A&M University at Qatar and ConocoPhillips Qatar co-hosted the 2013 annual Qatar Process Safety Symposium. ConocoPhillips Qatar agreed to sponsor the symposium for a five-year period, making attendance at the event free for all participants.

The two-day event, titled "The Importance of Leadership Commitment in Making Safety a Core Value", featured 18 speakers presenting topics that

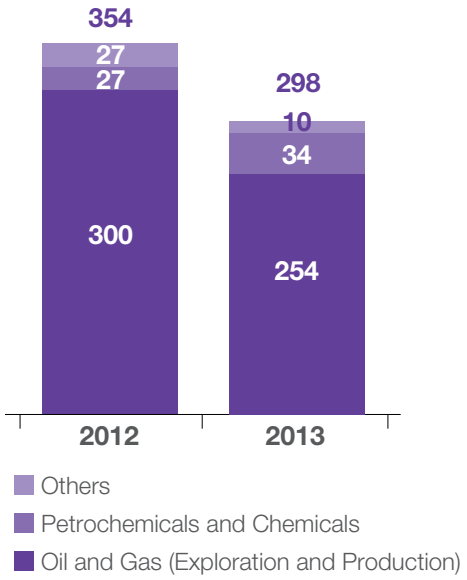
ranged from incident case studies and investigations, to process safety research and best practices, to safety success stories.

The symposium provides a platform for the exchange of knowledge on industrial safety. As such, it is believed it will have an impact on awareness, research and development as well as supporting the application of more stringent safety practices in the field.

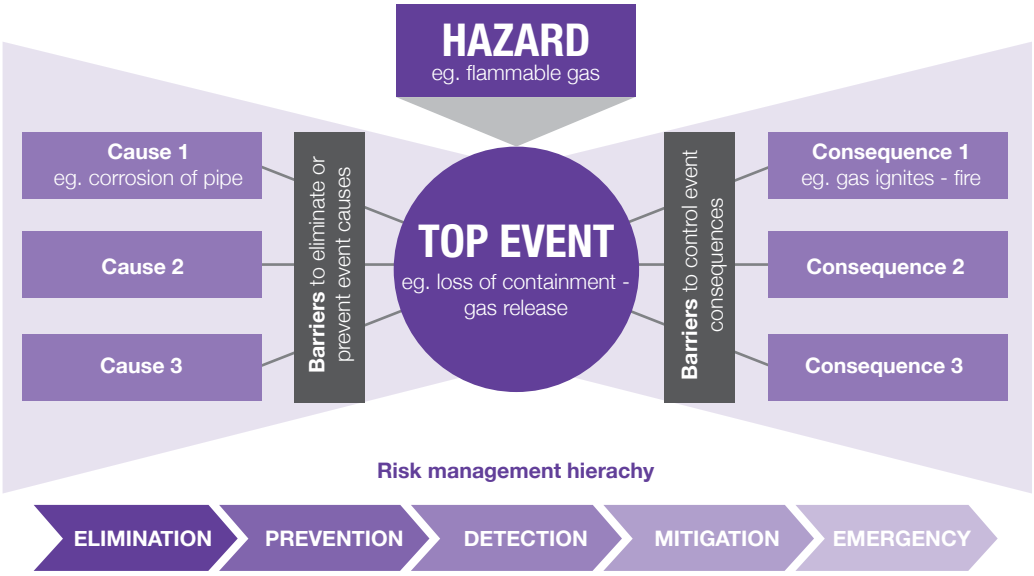
Case Study: RasGas - Preventing Major Accidents: the Bow-tie Approach

Bow-ties (or barrier diagrams) provide greater visibility to management that MAH risks are being managed. In RasGas's case, their use enhances the effectiveness of internal management systems by integrating SHE-critical barriers and processes with operating management systems. They present the big picture and can capture the sequence of events as well as previous incidents. RasGas uses bow ties in combination with increasing analysis of tier 4 process safety indicators (a part of their four-tier framework for monitoring, reporting and learning from process safety indicators). Tier 4 indicators are leading indicators, designed to mitigate the risks of future major events.

Loss of Containment Incidents



**For 31 comparable companies reporting in 2012 and 2013. (Out of 33 for whom the indicator is relevant).*



**Preventing Major Accidents: the Bow-tie Approach*

EMERGENCY RESPONSE PREPAREDNESS

In the event of an emergency, effective management response minimises harm and loss. Emergency response management is a process of systematic management of emergency events or conditions to enable the timely and effective application of resources and response.

In 2013, DG conducted an assessment of the strengths and weaknesses of the energy and industry sector in emergency management. This paved the way for addressing areas of concern and developing guidelines and regulations to meet the State of Qatar's legal obligations.

To address issues identified in the findings of incident investigations and emergency drills, and to address up-to-date requirements in sector law, DG initiated the development of a set of technical regulations. The "Technical Regulations on Emergency Preparedness in Oil and Gas Sector" has undergone consultation involving the Emergency Response Coordination Forums of Ras Laffan and Mesaieed Industrial Cities. The regulations address the minimum mandatory requirements to be met by oil and gas companies in the following areas:

- Preparation for emergency.
- Emergency detection and communication.
- Emergency evacuation, escape, and assembly.
- Emergency lighting.
- Fire prevention.

In addition to the development of Regulations on emergency preparedness, following Guidelines were developed:

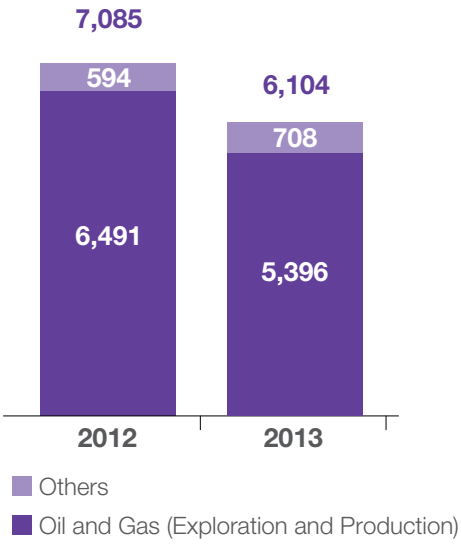
- Guidelines for Emergency Preparedness in Oil and Gas Sector
- Guideline on emergency exercise and mutual aid in Oil and Gas Sector

The sector's 'Framework for Management of Major Accident Hazards', continues to be developed and reviewed by a group representing all stakeholders including entities external to the sector, as appropriate.

Emergency Response Drills

Emergency response drills are essential to create awareness and to practice and evaluate the right response should an emergency occur. A total of 33 companies, representing 92% of the sector, reported the number of emergency response drills conducted in 2012 and 2013. A total of 6,104 emergency response drills were completed in 2013, compared with 7,085 in 2012.

Emergency Response Drills



**For 33 comparable companies reporting in 2012 and 2013.*

Case Study:
Dolphin Energy Emergency Preparedness

Dolphin Energy carries out regular drills (a total of 18 in 2013) and table-top exercises. Dolphin Energy has carried out two complex and multi-faceted exercises in the UAE and Qatar, unannounced, and out-of-hours. The exercise in Qatar lasted more than eight hours and involved about 40 responders and 15 role-players, while the exercise in the UAE lasted over six hours involving 37 responders and 14 role-players. These exercises test Dolphin Energy's readiness for various emergency scenarios. The crisis and emergency management system, as well as facilities and equipment for all response rooms, worked as intended.

Case Study:
QP and Total E&P Qatar Conduct Safety Drill

Qatar Petroleum (QP), in partnership with Total E&P Qatar, organised a joint exercise to test their intervention and co-ordination efficiency in the event of an emergency.

The Alpha Exercise, which was held on Halul Island, depicted a scenario involving a gas release leading to a 'huge explosion and fire', resulting in injuries. The exercise involved QP's Halul emergency response team and Total E&P Qatar. There was an efficient and immediate response from QP as well as co-ordination with Total's crisis management team.

A future large-scale exercise involving QP and Total E&P Qatar teams will focus on an environmental scenario.

Case Study: Qatargas Emergency Response and Security

Qatargas has a dedicated emergency response team, active 24 hours a day, seven days a week. It includes an ambulance service that serves the plant and other facilities operated by the company. As part of emergency response preparedness, emergency response drills and exercises are carried out every year, with 239 completed in 2013, including 16 drills and exercises for tier-2 and tier-1 level events.

In addition to the drills and exercises, 120 basic fire-fighting sessions involving 2,233 employees, and two home safety sessions for local schools, were carried out. Furthermore, an inspection testing and maintenance programme is in place to ensure the effectiveness and reliability of the fixed fire protection systems and other fire equipment in the plant and other facilities.

WORKFORCE ENGAGEMENT

A strong health and safety culture among employees and contractors is essential to the successful management of health and safety risks. A knowledgeable, well trained and alert workforce can often be the most effective tool for preventing incidents.

A positive health and safety culture is established when health and safety are valued as highly as productivity, and when continuous and active stakeholder engagement is routine. This requires managerial and supervisory involvement and demonstrable leadership on the importance of health and safety.

Case Study:
ORYX GTL - Incentivising a Safety first Approach

ORYX GTL consider rewarding safe behaviour and promoting best practice among its workforce as critical success factors in the company's HSE performance.

Incentives stimulate creative thinking and a sense of pride among employees, contributing to the company's slogan of "Safety is our way of life". An incentive scheme has been developed which includes:

- Each employee receiving a weekly bonus for every week completed without a recordable incident. All contractors working at the facility for longer than six months without recordable incidents are rewarded.
- A special HSE award is presented to employees who demonstrate safe behaviour par excellence, the application of best practices in terms of HSE or have demonstrated behaviour that has prevented accidents or injuries.
- Takreem awards – shopping vouchers are awarded for positive safety behaviour or behaviour that demonstrates an employee's commitment to HSE as a way of life.
- Rewards and refreshments are regularly given to employees and contractors in appreciation of high-risk work that has been conducted safely, without incident.

Case Study:
RasGas sub-contractor HSE management

RasGas Venture oversees the safety, health, environment and security (SHE&S) management of JGC, the prime contractor on the Barzan Gas Project. With JGC, RasGas monitors the performance of subcontractors.

The safety provisions in place include adhering to set supervisor-to-worker ratios, which are increased for late and night shifts. Each subcontractor's performance is evaluated against key indicators, and before a subcontractor can begin work on site, it must pass a SHE&S readiness review and demonstrate that its management system meets the requirements of the JGC safety management system.

Sharing lessons learned is important. To date, JGC and its subcontractors have issued more than 500 SHE&S-related communications, including incident alerts, awareness bulletins, promotional posters, and examples of good and bad practice.

Training is delivered through JGC and qualified trainers, who must meet a standard comparable to NEBOSH, the internationally recognised certificate in occupational safety and health. Fifty-seven SHE&S training courses are provided for more than 40 nationalities in five languages.

Approximately 28 per cent of the mostly minor injuries on the project have involved workers in the 25–30 age range, so new and inexperienced workers wear a white armband for two months, and younger workers are paired with more experienced colleagues.

Weekly management walk-throughs drive work-site hazard awareness and promote engagement between workers and supervisors, and JGC and subcontractors meet weekly to review any open actions. JGC hosts monthly SHE&S management meetings to review the status of the programme and to look ahead. Similar meetings are held quarterly with senior management.

Case Study:
Oxy - Safety, Environment, Health and Risk Engineering (SEHRE) Committee

The SEHRE Committee, which is chaired and staffed by employees, meets monthly to discuss employee interests or concerns and promote best practices.

Meetings are open to all employees and are attended by Oxy Qatar's Executive Leadership Team (ELT), including Oxy Qatar's President and General Manager. The ELT provides an update on HES&SR performance and discusses new initiatives and best practices.

Employees are encouraged to share concerns or suggestions. Comments are documented and monitored in an action log to ensure they are tracked to completion.

Case Study:
Total E&P - Qatar – 12 Golden Rules for all

Total E&P in Qatar analysed that people's behaviour is a key factor in both avoiding incidents and limiting their impact. This applies not only to employees but also to contractors, who represent 80% of their work-hours.

Total E&P Qatar has launched, a second 12 Golden Rules campaign, following an initial one held in 2011. As a result of experience gained from the first campaign, Total E&P Qatar devised the campaign to better address people's culture and education as well as their working environment.

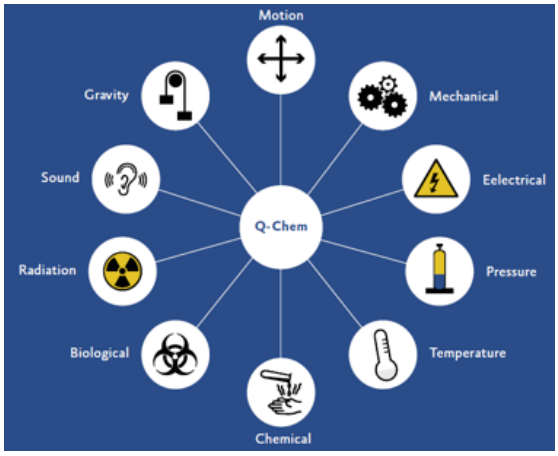
Total E&P Qatar has set up tools to spread the 12 Golden Rules messages. E-learning modules have been developed for English speaking workers with access to a computer. For workers on site, a set of 12 playing cards have been developed. Every morning, a five-minute game helps all to overcome any language barriers and understand the 12 Golden Rules.

The company recorded zero lost time injuries and recordable injuries in 2013, for both employees and contractors.

Case Study:
Q-Chem - QSafe observation and hazard recognition programme

Q-Chem has developed a hazard recognition programme named "QSafe" to increase employee and contractor awareness of behavioural hazards on the job. The programme, implemented since 2006, has become a keystone of their proactive safety approach. Hazard recognition not only improves the safety of operations, but also builds knowledge and camaraderie among employees because everyone is responsible for the safety of every individual on site.

Q-Chem records more than 32,000 observations per year, with around 70% average monthly participation. QSafe is also integrated into the company bonus structure as one of the performance metrics.
The QSafe Improvement Team has implemented more than 3,000 corrective actions as a result of observations made during 2013. The impact of the QSafe programme has been to create a safer workplace and to build a culture of "one house" in which everyone is watching out for the safety of each other.



Case Study:
Qatalum - HSE Contractor Forum

In order to better address and prevent health and safety incidents with contractors, Qatalum formed the Contractor Forum - a joint committee between all contractors, all HSE management, and Qatalum senior management. The forum meets quarterly and provides an opportunity to address any problems related to HSE performance and to share best practice, with the goal of continuous improvement. Contractor recordable injuries and lost time injuries have both decreased significantly, in large part due to the forum.

AUDITS, INSPECTIONS, SUPERVISION AND COMPLIANCE

Company Audits and Inspections

Audits and inspections are important tools used to monitor health and safety performance and to check on the rigour of management systems. Audits provide an independent, objective assurance of systems and help to identify gaps and areas of improvement. Inspections are mostly used to ensure the company is adhering to specified requirements and standards set out in company policy and national law.

In 2013, 32 companies reported on their audit activities which covered both employees and contractors. In 2013, 1,443 audits were completed, exceeding the number in initial plans. There were 1,117 audit recommendations initiated in 2013, and 813 completed.

Audits	2012	2013
Number of companies that reported	28	32
Number of audits planned	1,379	1,443
Number of audits actual	1,613	1,771
Audit recommendations initiated	1,613	1,117
Audit recommendations completed	562	813

For inspections, 25 companies reported a total of 7,510 inspections in 2013.
This represented a 99.7% completion rate against the number of inspections planned for 2013.

Inspections	2012	2013
Number of companies that reported	23	25
Number of inspection planned	232	7,510
Number of inspection actual	219	7,493

Health Supervision and Compliance

Monitoring the energy and industry sector's implementation of HSE procedures, guidelines and policies for compliance purposes is an essential part of DG's responsibilities. In carrying out is supervisory role, DG seeks to engage positively with stakeholders and recognize good HSE practice and legal compliance.

In 2013, various stakeholders were visited by DG Health and Health Care team. A health and healthcare checklist is used while visiting the companies. The checklist includes references to legal and DG requirements covering 21 topics, and in 2013, was updated to include food safety matters. In 2013, DG Health and Health Care team conducted 19 HSE supervision visits to six operators.

	Location				Total
	Mesaieed	Doha	Ras Laffan	Dukhan	
Supervision visits	7	6	6	0	**19**

DG in collaboration with the Supreme Council of Health raised the issue of reporting and notification of communicable diseases. A document entitled "Which disease to report, report to whom and when to report" clarified roles and responsibilities in the management of communicable diseases.

DG, as a focal point for the SCH on communicable diseases, facilitated implementation and coordinated the different stages of surveillance. Data and information pertaining to previous surveys within the industry has been collected. Focal points from within the industry for feedback, communication and training were nominated.

DG, in collaboration with SCH, conducted a workshop for the sector's health representatives on surveillance, outbreaks and control of communicable diseases in 2013. The aim was to prevent the spread of these diseases and decrease the burden of illness in the industry and the public at large. Twelve joint active surveillance inspections were completed in 2013, including one workshop for Doha.

	Location				Total
	Mesaieed	Doha	Ras Laffan	Dukhan	
Surveillance inspections	4	4	2	2	**12**

HSE Supervision

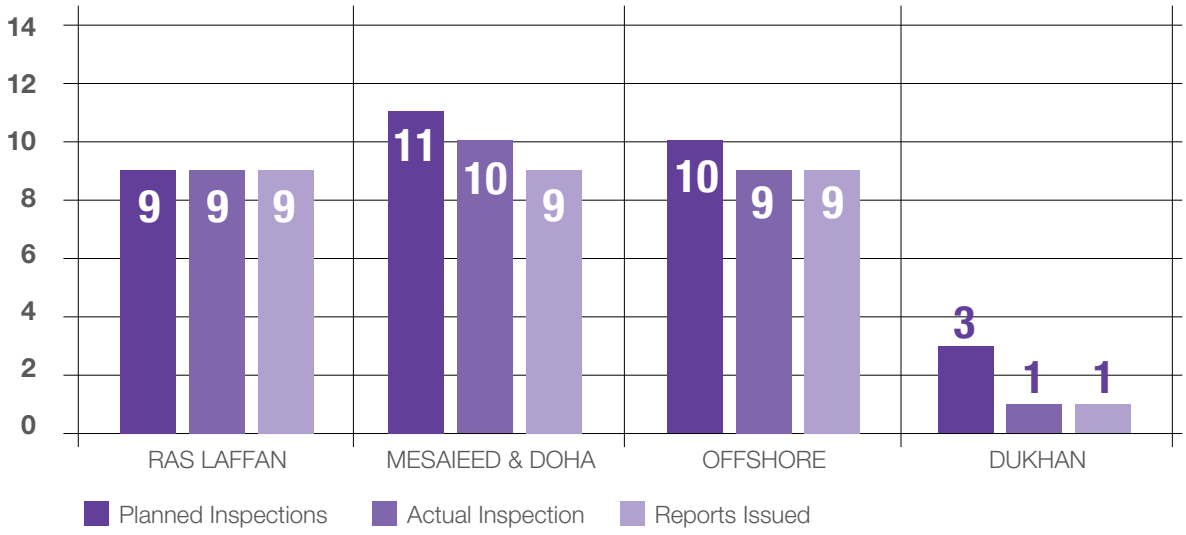
The purpose of supervision is to assess company compliance with the applicable HSE laws, regulations, international treaties, conventions, protocols, policies, guidelines and codes of practices. Supervision is conducted through document review, site verification and functional interviews with the relevant persons. In all, 33 supervision visits were scheduled to review implementation of approved DG HSE supervision plans in 2013. A total of 29 supervision visits were conducted and reports issued.

Supervision and Inspections

**For 36 reporting companies*

Information on the total planned supervision visits, actual supervision visits conducted and formal reports issued to stakeholders for all four industrial areas is displayed in the graph below.

GTS Supervision 2013



THE ENVIRONMENT

Water Management | Spills | Waste Management
Air Emissions | Biodiversity

2013 Achievements

2.2%
reduction in total fresh water purchased compared to 2012

36%
of waste was recycled in 2013 (2% short of the national target for 2016)

9%
reduction in NOx emissions

A UNIQUE NATURAL ENVIRONMENT

Safeguarding Qatar's natural environment poses challenges and opportunities. Qatar's natural capital, most notably its abundant hydrocarbon resources, has helped to create an economic boom and opportunity for rapid development. But this growth has also had an effect on an already fragile ecosystem. The environmental challenges Qatar faces include limited fresh water resources, managing growing volumes of waste with limited availability of landfill, threats to biodiversity from industrialisation and climate change, the loss of endangered species, and increases in various local pollutants mixed with sand-based particulates in the air.

Qatar's National Development Strategy 2011–2016 (NDS) translates the Qatar National Vision 2030 into a country-wide strategic action plan. The strategy connects the growth of national prosperity to the realities of environmental constraints by establishing a programme and action plans for strengthened environmental management.

The Sector's Environmental Approach

The State of Qatar has passed a variety of laws and regulations that seek to protect the environment. The country has also signed several international treaties on environmental conservation to which the sector adheres. Companies in the energy and industry sector seek to comply with the State's laws, regulations and environmental guidelines. They also seek innovative advances in technology that will take performance beyond regulatory requirements.

As the NDS states, industries can be a source of pollution as well as incubators of innovation that restore the ecological balance in Qatar. With the support of DG, the energy and industry sector strives to implement best practice in environmental management as well as develop creative solutions that enable Qatar to continue to grow within its environmental limits. Several companies have developed or are committed to developing standalone environmental management strategies, and 20 companies have an ISO 14000 certified environmental management system. Many companies are also investing heavily in research into environmental management, water reuse, flaring minimisation, LNG safety and on minimising local air pollutants such as NOx and SOx.

Across the sector, corporate approaches to environmental management tend to focus on five areas that reflect the main environmental impacts: water management, air emissions, prevention of and response to spills, waste management, and protection of biodiversity. Given the scarcity of water in Qatar and the sector's substantial role in its production and consumption, the management of water has received the greatest emphasis in company strategies.

Ministry of Environment (MoE) Permit to Construct and Consent to Operate

All companies within the sector require a Permit to Construct (PTC) or Environmental Authorisation from the MoE prior to establishing facilities. Companies also require a Consent to Operate (CTO) from the MoE which is updated and approved annually to account for changes in environmental standards and requirements. The PTC and the CTO represent the main tools of laws and regulation that govern the sector's operations in relation to the environment. In 2013, 31 companies from the sector reported compliance with the MoE CTO requirements.

DG maintains an updated CTO database, with CTOs provided by the MoE and companies. In 2013, DG's database contained 80% of the companies valid CTOs. The compliance status of received CTOs is assessed against company quarterly environmental reports of the applicable companies. Recommendations for improvement are given by DG to them.

Health, Safety and Environment (HSE) Legal Framework for Oil and Gas Sector

The 'Health, Safety and Environment (HSE) Legal Framework for Oil and Gas Sector' is a reference document for companies on HSE regulations. It is available in English and Arabic. To support compliance, DG conducts company visits and assessments to advise on potential areas of risk or opportunity. DG acts as a hub for sector-wide environmental awareness and collaboration.

In 2013, DG provided guidance for companies on enhancing the environmental performance of their operations, taking best practice into account. This included guidance on water management, waste management, air emissions, and spills.

WATER MANAGEMENT

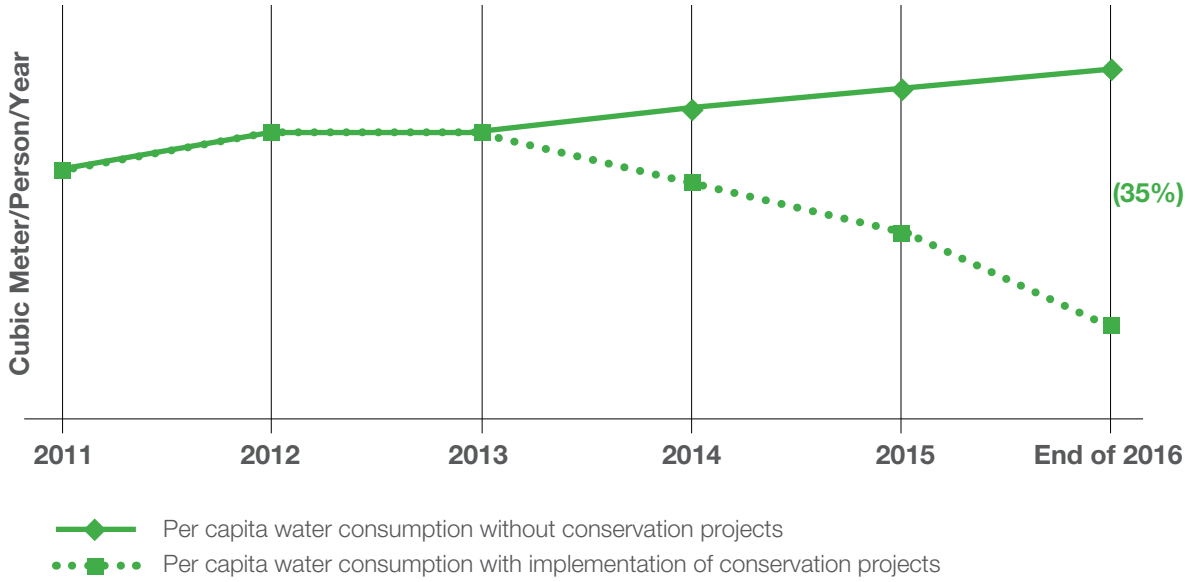
Water conservation is an issue of increasing importance in Qatar as it has one of the world's lowest levels of rainfall and highest rates of per capita water consumption. The Qatar National Development Strategy 2011-16 has stated that few tangible aspects of Qatar's life and economy need efficiency reforms as much as water - crucial to all human activity but in scarce supply. Fresh water is scarce and most of the water used in homes and businesses comes from the sea and must pass through energy-intensive desalination plants.

The country's desalinated, groundwater and recycled water resources, are subject to inefficiencies that may create stresses and eventually pose a threat to water security or require large financial investments to ease water shortages. These challenges have made it vital for Qatar to reduce network losses, invest in new technologies, conduct awareness-raising programmes and adopt water conservation measures.

Qatar is already undertaking initiatives to improve water efficiency. An important example, given its role as the national water distribution company, is Kahramaa's Tarsheed initiative. Kahramaa's efforts are intended to stem losses of desalinated water in its distribution network and reduce consumption levels. Tarsheed represents a strategic, long-term commitment to exploring, partnering and understanding how to reduce water and electricity consumption levels. It is about being mindful, creative and rational - and inspiring others to change their habits and help sustain Qatar's national resources through joint action. To help achieve the ambitious targets of the Tarsheed initiative, Kahramaa has focused on developing strategies and supporting projects in:

- Efficiency in consumption.
- Conservation in resources.
- Awareness and community.
- Law enforcement and regulation.

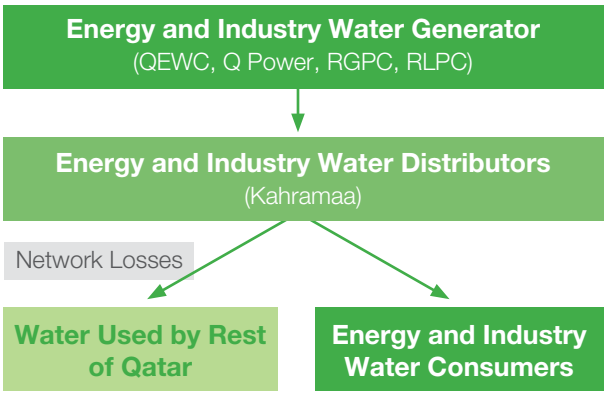
Tarsheed: Water per capita consumption reduction target - 35%



The energy and industry sector includes the water generators, water distributors, and business consumers. The sector has a significant role to play in managing water resources by improving its management of water generation and distribution in its own activities and among other consumers in Qatar. This is coupled with developing water conservation technologies and practices, and increasing water reuse and recycling.

Water Generation, Distribution, and Consumption

As shown below, the sector includes companies that produce water, a national distributor, and various companies that buy water for their own use.

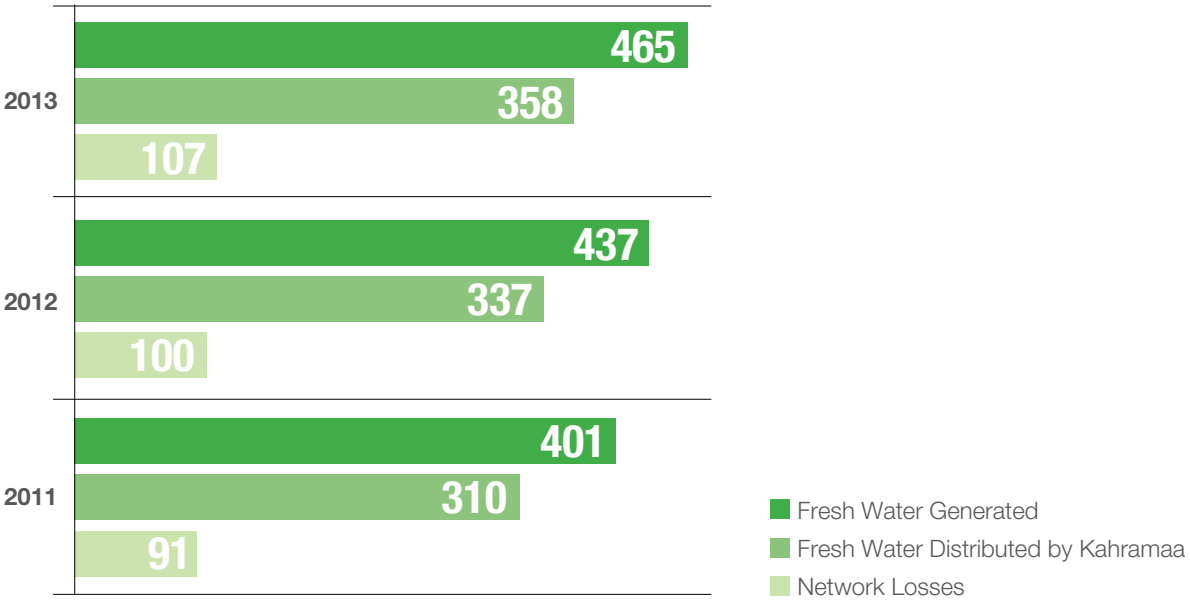


Water Generation and Distribution

The sector covers the main four water producers in Qatar: Qatar Electricity and Water Company (QEWC), Qatar Power (Q-Power), Ras Girtas Power Company (RGPC), and Ras Laffan Power Company (RLPC). These companies desalinate seawater to create portable water and pump it to the Qatar National Distribution Company, Kahramaa. Kahramaa in turn distributes water to industrial and domestic consumers.

Power and Utility Water Generation and Distribution

(million m^3)



In 2013, the power and utilities subsector generated 465 million m^3 of water and distributed 358 million m^3 throughout Qatar. Information on water distributed and used by the rest of the sector is provided below.

Water Consumption by the Energy and Industry Sector

Fresh water consumption by the sector has been classified in two categories: water purchased from the national distribution company, and water produced on-site. Twenty five companies reported total fresh water purchased of 14.1 million m^3 in 2013, an overall decrease of 2.2% from 2012 levels and a fraction of the water that is generated by the utility companies.

Total water generated on-site in 2013 amounted to 60.8 million m^3, a significant increase (of 88.7%) from 2012 levels, and almost four times the volume purchased. This shows that water consumption within the sector continues to be dominated by water extraction from the sea with on-site treatment to make it suitable for use in production processes. The significant increase in water generated on-site is the result of two new water intensive petrochemical production lines that came on stream in 2013. The figures presented exclude sea water that is used for cooling and returned directly to the sea.

Sector Fresh Water Consumption

Indicator	Comparable Companies	Water Consumed (m^3)*		
		2012	2013	% Change
Fresh water used - from purchased	25	14,409,602	14,096,410	-2.2 %
Fresh water used - from company generated	25	32,207,938	60,764,726	+88.7%
Total fresh water used	22	42,510,301	70,588,542	+66.1%

**Excludes power and utilities subsector*

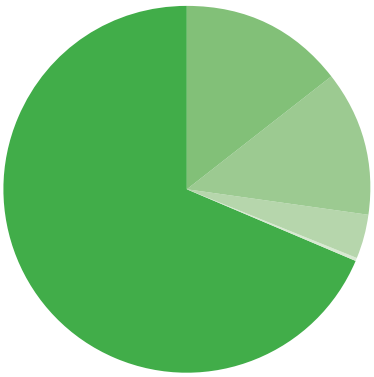
Thirteen companies reported a reduction in water consumption between 2012 and 2013. Qatargas, which is one of the largest consumers in the sector, achieved a 2% reduction in total fresh water consumption between 2012 and 2013. Qatargas was able to achieve this by implementing wastewater recycling and reuse projects, including the "Membrane Bioreactor (MBR)" project. This approach involves upgrading existing treatment facilities for secondary treatment using MBRs coupled with a tertiary treatment system comprising Multi-Media Filtration and Reverse Osmosis units.

Water Consumption by Subsector

The petrochemical and chemical subsector was the largest consumer of water in the sector, with 68.4% of total consumption. The petrochemicals and chemicals subsector also recorded a 156% increase in water consumption as a result of two new production processes starting up.

Six oil and gas companies are within the 22 reporting companies but their share of water consumption is less than 0.3% of total consumption in 2013.

Water Consumption by Subsector (%)



- Petrochemicals and Chemicals **68.4%**
- Refining **14.7%**
- Liquefied Natural Gas/Natural Gas **12.7%**
- Mining, Minerals and Others **3.9%**
- Oil and Gas (Exploration and Production) **0.3%**

**For 22 comparable companies reporting in 2013*

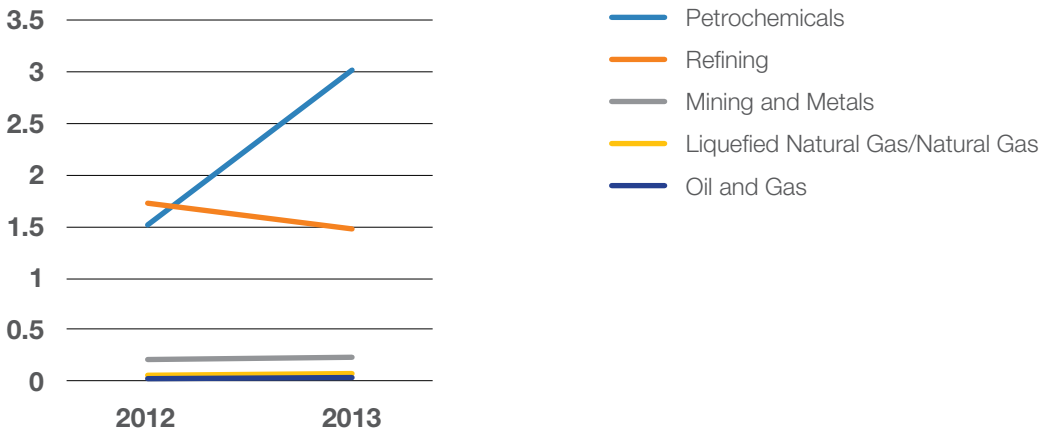
Water Intensity

Water intensity refers to the amount of water consumed per unit of production. In 2013, water intensity for the sector increased from 0.21 m^3 per tonne of production in 2012 to 0.35 m^3 per tonne of production in 2013, an increase of 64%.

Water intensity shows a major increase in the petrochemical and chemical subsector which reflects the major impact of one company that doubled its water use from its generation plant. The biggest decrease appears in the refining subsector where one company has achieved a 32% increase in production and a 6.2% drop in water consumption.

Fresh Water Intensity by subsector

Water Used (m^3) per Tonne of Production



**For 17 comparable companies reporting in 2012 and 2013*

Water Discharge and Recycling

The energy and industry sector has committed to work towards "near zero" waste water discharge into the sea, in line with the MoE target of achieving "Zero Liquid Discharge" of process wastewater by December 2016.

The sector is aiming to achieve this primarily through increased investment in wastewater treatment that enables the re-use of wastewater in production processes. When such a process is not possible, the treated water is used to irrigate green zones within and around industrial premises. Three companies in the sector have included the goal of "zero water discharge" by 2016 in their five-year sustainability strategies, while one company is aiming to achieve this by 2018. Additionally, two companies have stated in their strategy that they will achieve a significant level of waste water recycling, ranging from 60%-85%, by 2016.

There is much to be done to achieve the ambitious goal of "near zero water discharge". Simultaneously, the sector is working to reduce the impact of discharged water by monitoring effluent quality and temperature. Many companies have committed to initiatives to reduce or recycle their wastewater in their five-year sustainability strategies, with nine companies declaring specific objectives and projects. For example, Q-Chem is developing an underground wastewater treatment plant and increasing internal water reuse to be completed in 2016. Qatar Steel plans to establish a process water treatment plant, and WOQOD is planning to implement a water recycling system at its manual car wash facilities.

Wastewater Discharges to Sea

In total, only 14 companies reported two years of comparable data for water discharged to the sea. The sector water discharge to the sea in 2013 was 4.63 million m^3, an increase (of 7%) compared to 2012 levels.

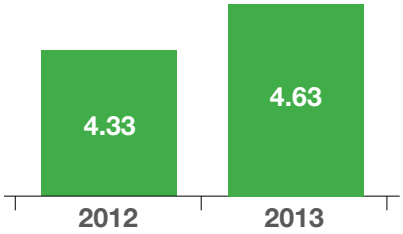
The petrochemicals and chemicals subsector contributed to approximately 47.5% of the total sector discharge to the sea, although it must be noted they had the most companies (five) reporting on this indicator. Only one subsector; mining, minerals and other, achieved a reduction in water discharges to the sea in 2013 compared to 2012. The refining subsector recorded a 61% increase in water discharged to the sea, the largest of any subsector.

Companies recognise the need to return seawater to the sea at temperatures and salinity levels that do not harm marine life. Conditions of discharge are regulated by the MoE, and seawater used for cooling or waste water discharged to the sea is tested to ensure it does not breach levels agreed within CTOs.

In alignment with the goals of the NDS and MoE requirements, DG is continuing its work with companies to design and install a comprehensive seawater quality monitoring network to evaluate the effectiveness of treatment options and assess the cumulative effect on receiving bodies of water.

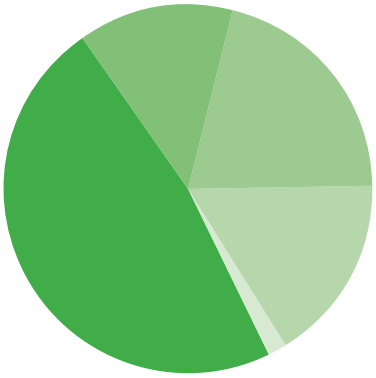
Total Water Discharge to the Sea

(Million m^3)



**For 14 companies that provided two years comparable data.*

Percentage of Water Discharge to the Sea by Subsector



- Petrochemicals and Chemicals **47.5%**
- Refining **13.8%**
- Liquefied Natural Gas/Natural Gas **20.8%**
- Mining, Minerals and Others **16.3%**
- Oil and Gas (Exploration and Production) **1.6%**

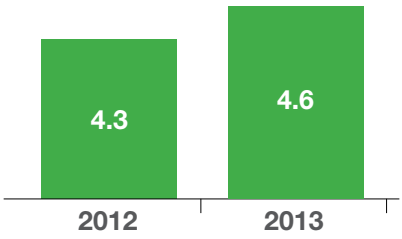
** For 14 comparable companies reporting in 2013*

Wastewater Discharges other than to Sea

Water discharge to bodies other than the sea includes water re-injection into wells, water pumped into evaporation ponds, or handled by third-parties. Only 19 companies reported two years of comparable data for water discharge other than to sea. The total discharge for the sector was 4.6 million m^3, an increase of 6.2% compared to 2012.

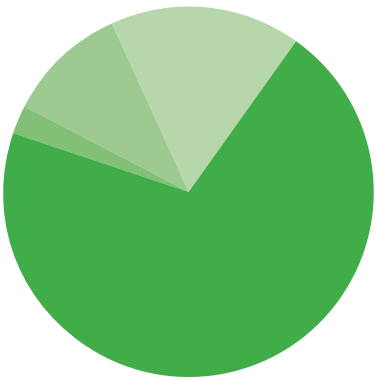
Total Water Discharge - Other than Sea

(million m^3)



**For 19 comparable companies reporting in 2012 and 2013*

Share of Water Discharge other than Sea by Subsector (%)



- Liquefied Natural Gas/Natural Gas **70.3%**
- Mining, Minerals and Others **2.7%**
- Petrochemicals and Chemicals **10.6%**
- Transport, Storage and Distribution **16.4%**

**For 19 comparable companies in 2013*

The largest contributor to water discharge other than to sea is the LNG/NG subsector, reporting 70.3% of discharge in 2013. It should be noted however, that a large number of companies have not provided data for this indicator. Overall, the largest reported increase in water discharged other than to sea between 2012 and 2013 was from the mining, minerals and others subsector, with an increase of 119%.

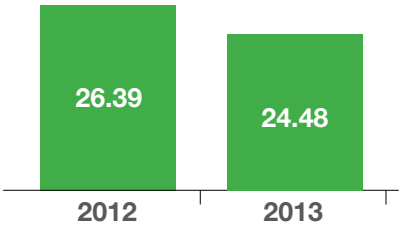
Water Recycling

Water recycling for 2012 and 2013 was reported by 15 companies. In 2013, the amount recycled was more than 24 million cubic metres, 7.2% less than the amount recycled in 2012. However, three companies in the sector made significant increases in water recycling, including Qatar Steel (150%), QAFAC (86%), and WOQOD (60%). For WOQOD, all car-washing machines installed in WOQOD's new service stations have been fitted with water-recycling systems that reuse approximately 90% of the water used in the cleaning process.

Three subsectors; oil and gas, petrochemicals and chemicals, and refining, have contributed to 96.4% of the total water recycling by the sector. It should be noted that this is based on only 50% of companies reporting this indicator. Only three subsectors have reported an increase in water recycling in 2013 compared to 2012.

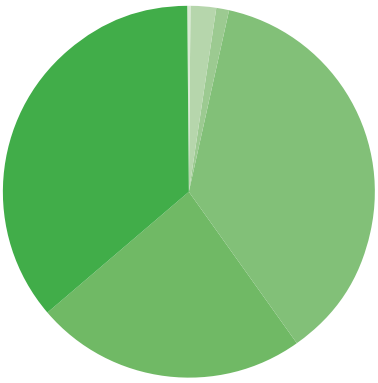
Total Water Recycling

(million m^3)



**For 15 companies that providing two years comparable data.*

Percentage of Water Recycled by Subsector (%)



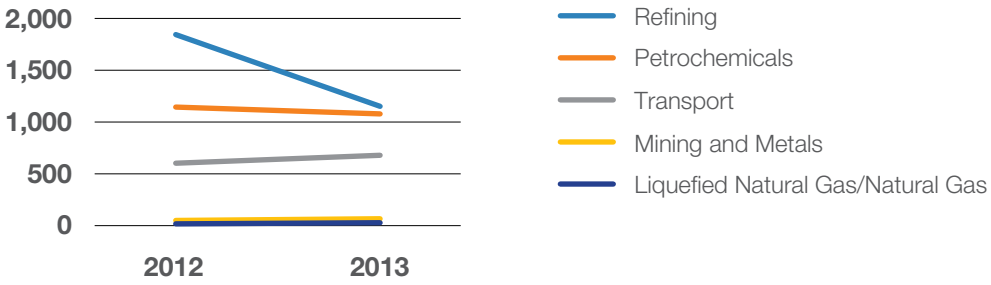
- Refining **36.2%**
- Petrochemicals and Chemicals **23.4%**
- Oil and Gas (Exploration and Production) **36.8%**
- Mining, Minerals and Others **0.9%**
- Liquefied Natural Gas/Natural Gas **2.4%**
- Transport, Storage and Distribution **0.2%**

**For 15 comparable companies reporting in 2013*

The intensity of recycled water per unit of production for the whole sector in 2013 was 85.3 litres per tonne of production, a decline of 6.7% compared to 2012. A single reporting company from the petrochemical and chemical subsector represents more than 56% of the sector's total production volume and it has increased its recycling output by 86% from 2012 levels, while increasing production by 9.7%. The transport, storage and distribution subsector was the only subsector that increased water recycling intensity per unit of production, with an increase of 10.7%.

Water Recycling Intensity

Litres of water recycled per tonne of production



**For 11 comparable companies reporting in 2012 and 2013*

Case Study:
Water Use at Qatar Shell's Pearl GTL Plant

Qatar Shell's Pearl GTL plant in Qatar makes synthetic oil products from natural gas, including cleaner-burning diesel and oils for advanced lubricants. Shell's GTL plant could operate without the need for a fresh, external water source and has a self-sufficient water system. The gas-to-liquids process also produces water which is then recycled to avoid the need for fresh supplies. Natural gas is partly oxidized at high temperature and pressure to produce synthesis gas, a mixture of hydrogen and carbon monoxide. The water is cleansed using live micro-organisms that remove chemical impurities. Then it is processed to remove salts and most of the treated water is used to absorb the heat generated in the GTL process. Water is converted to steam that drives the turbines generating the plant's electrical power. Pearl's treatment plant is able to handle 280,000 barrels of water a day.

SPILLS

The exploration, extraction, storage and transportation of hydrocarbons pose an ongoing risk of accidental spill of oil or other hazardous materials. Unintended losses of hydrocarbons, or other hazardous substances, have the potential to pollute water, soil and harm local biodiversity. The energy and industry sector takes control measures to prevent any spill, and mitigation and recovery measures in case of an accidental spill.

A total of 23 companies reported comparable data for the number of significant oil spills, defined as a loss of hydrocarbons of more than one barrel (equivalent to 159 litres of oil) that reached the environment. The comparable number of oil spills declined from 16 in 2012 to seven in 2013. However, the total volume of spills increased significantly from 31,355 litres to more than 3 million litres. This increase was attributed to one major spill that resulted in three million litres of 'oily water' being released on land, contaminating an area around its storage tank.

Oil Spills

	Comparable Companies	2012	2013
Significant oil spills (> One Barrel)	31	16	7
Volume of spills (Litres)	23	31,355	3,043,995*

**includes one major spill that resulted in the loss of approximately of 3 million litres*

To ensure rapid response to any major spills occurring offshore, QP has a well-developed national emergency response capability. The QP Oil Spill Emergency Response Department sets quality objectives, which include measures to control and reduce oil spills. The Oil Spill and Emergency Response Department at QP is the designated spill notification point for the state of Qatar, with all spills reported to the Ras Abu Abboud communication control room, operated by QP.

Maersk Oil Qatar, as a member of the Regional Clean Sea Organization, is committed to the 'Clean Gulf' concept. The objective of this forum is to protect the marine environment in the Gulf from the impact of oil and provide opportunity for promoting collaboration and sharing experience and capability. Maersk Oil Qatar uses the OILMAP software tool, which uses weather patterns and hydrological models to analyse and project the direction and extent of marine oil spills.

Qatargas has implemented a management framework to support escalated incidents, including major spills, in conjunction with its various productions asset-based Emergency Response Plans (ERPs) and Corporate Response Management Plan, which helped the company maintain zero reportable environmental spills in 2013.

WASTE MANAGEMENT

Qatar has committed to developing a comprehensive solid waste management plan focusing on encouraging recycling, incentivizing waste reduction, promoting source separation and developing a robust recycling sector, with the goal of reaching a national recycling rate of 38% of solid waste by 2016.[1]

In pursuit of this goal, the government has established an integrated domestic solid waste management centre in Mesaieed. The centre is expected to reduce the share of domestic waste disposed of in landfills by 3%–5%. The centre will support efforts to convert waste to energy and raise the level of waste recycling from 8% to 20-25%.[2]

The energy and industry sector has committed to the national goal of waste reduction, reuse, and recycling. Given the nature of the sector's operations and the materials it handles on a regular basis, the treatment and disposal of hazardous waste represents another aspect of the environmental challenge facing the sector. Hazardous waste disposal is currently handled by third parties approved by the Ministry of Environment. The relative immaturity of waste management facilities in the region means that a number of companies are taking steps to ensure that third-party waste handlers adhere to international best practice.

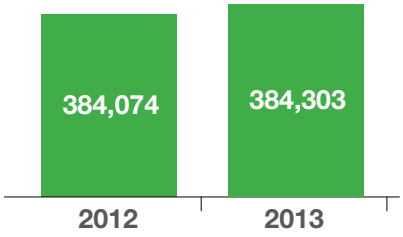
Many of the efforts being taken by companies are outlined in their five-year sustainability strategies, with one company stating a commitment to 100% safe disposal of hazardous waste. Three other companies included collaboration with other companies to promote the reuse of waste within their strategies.

Waste Disposed

Waste disposal for 2012 and 2013 was reported by 29 companies. In total 384,303 tonnes of hazardous and non-hazardous waste was disposed in 2013, a negligible increase of 0.1% compared with 2012.

Total Waste Disposed

(Tonnes)

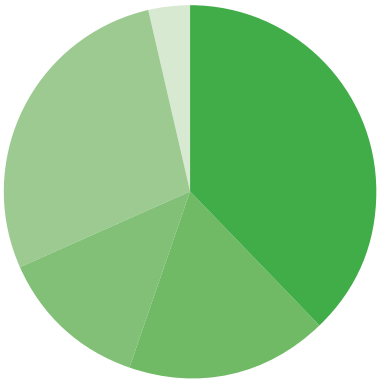


**For 29 companies reporting in 2012 and 2013*

Subsector Waste Disposal

The mining, minerals and others, and refining subsectors were the biggest contributors to the total volume of waste disposed, generating a combined amount of 251,823 tonnes or 65.5% of the sector total. The refining subsector achieved the biggest reduction in waste disposed, cutting 15,320 tonnes of waste in 2013, a 12.55% reduction on 2012. The power and utilities subsector achieved the highest percentage reduction of 15%, or 128 tonnes of waste between 2012 and 2013.

Share of Total Waste Disposed by Subsector (%)



- Mining, Minerals and Others **37.8%**
- Oil and Gas (Exploration and Production) **17.7%**
- Petrochemicals and Chemicals **12.9%**
- Power & Utility **0.2%**
- Refining **27.8%**
- Liquefied Natural Gas/Natural Gas **3.6%**

**For 29 companies reporting in 2012 and 2013*

[1] *Qatar National Development Strategy 2011-2011, page. 225*
[2] *Qatar National Development Strategy 2011-2011, page. 225*

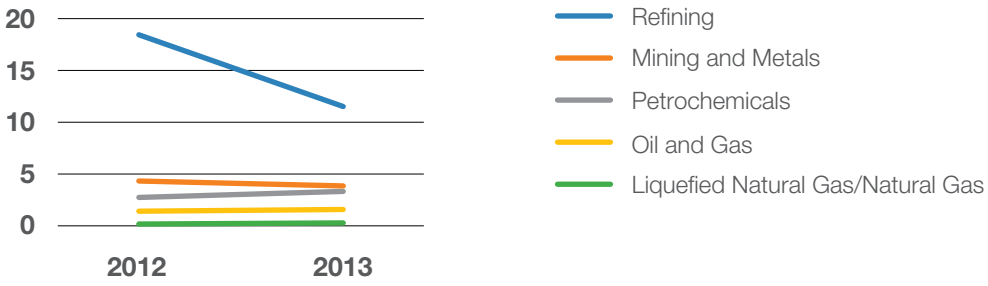
Subsector Waste Intensity

As a sector, waste intensity increased by 10% in 2013 to 1.1 kilograms of waste disposed per tonne of production. For the six subsectors that had sufficient information to calculate waste intensity, three have shown improvement in 2013. The remaining three subsectors show an increase in the amount of waste disposed per tonne of production.

The refining subsector reported the highest waste disposal intensity in 2013, but has reduced waste disposal intensity by 30% in 2013, more than any other subsector. The petrochemicals and chemicals subsector has shown the biggest increase in waste disposal intensity in 2013, with an increase of 53%.

Waste Disposal Intensity

Kg of Waste Disposal per Tonne of Production



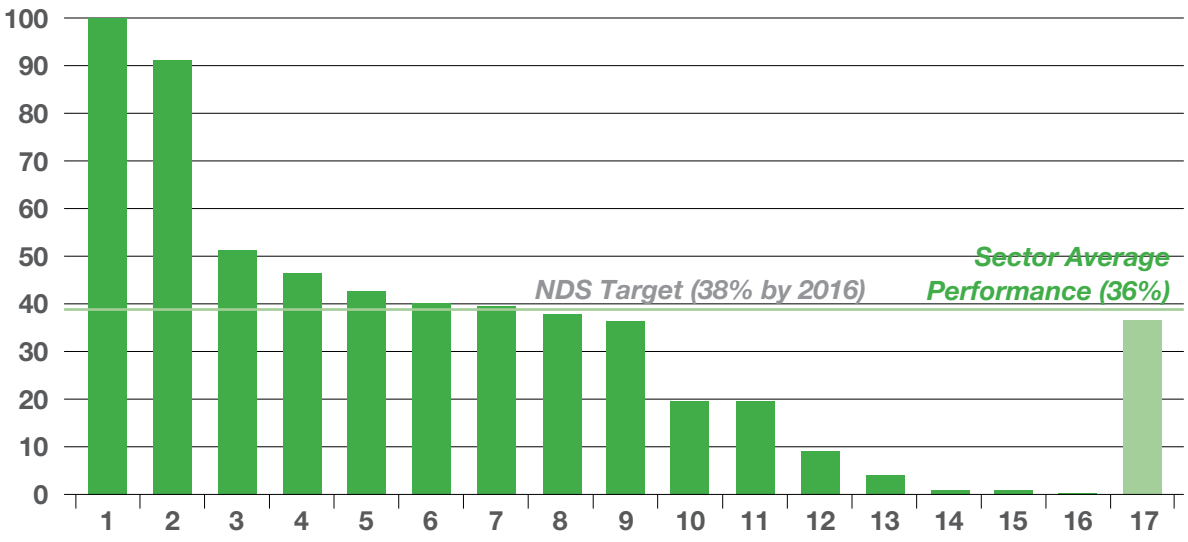
**For 21 comparable companies reporting in 2012 and 2013*

Waste Recycling

Twenty six companies reported the amount of waste recycled in 2012 and 2013. In total, the amount recycled in 2013 was 218,694 tonnes, which was roughly the same amount as 2012. This puts the sector's overall recycling rate at approximately 36% in 2013, just short of the NDS target of 38%.

Looking at recycling rates on a company by company basis, eight companies have already reported recycling rates above the NDS target of 38%, with a further two reporting waste recycling rates of more than 30%, and six companies reporting less than 30% waste recycling.

Percentage of Waste Recycled - Companies Performance Against NDS Target



Most companies in the sector have started initiatives to reduce the amount of waste disposed, ranging from cutting office waste to minimizing waste generated from operations. For example, Dolphin Energy has continued to implement its recycling programme, now in its fourth year. The Green IT initiative enhanced its commitment to recycling by optimizing IT refresh cycles and incorporating IT equipment disposal and recycling into all 'call off' contracts. RasGas launched a corporate waste management programme in 2009 which provides a cradle-to-grave framework for waste minimisation, collection, treatment, storage, reuse, recycling and final disposal. During 2013, 26% of ORYX GTL's waste disposed off site was either recycled or recovered. Waste recovery in ORYX GTL initiatives during 2013 included:

- Metal recovery from spent catalyst (cradle-to-cradle life cycle).
- Investigation and investment in greener, responsible pyrolysis technology that converts generated industrial waste into valuable products. During 2013, approximately 3,930 m^3 of hydrocarbon waste was treated using pyrolysis technology at the Al Haya Waste Management Facility in Mesaieed. Almost 80% of hydrocarbons treated were recovered, a substantial increase on the previous year.

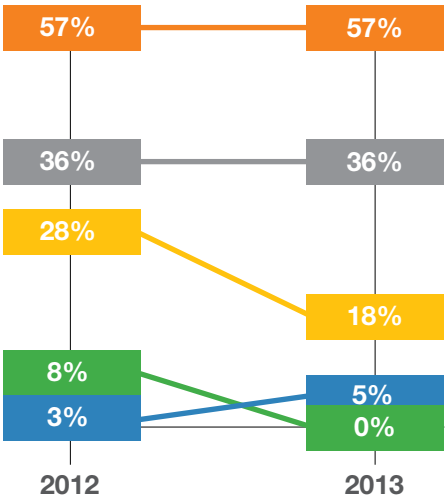
It is evident that more companies in the sector are collaborating in order to reuse operational waste based on the principle that one company's waste is another company's input material. For example, Qatar Steel and Qatalum explored using carbon-bearing waste materials from Qatalum in Qatar Steel's steel melting shop as a replacement for lump coke and recarburizers. Results of the trial, conducted at the electric arc furnace, were encouraging. The process, now streamlined, recycles 750 tonnes of different carbon waste at Qatar Steel's furnaces each month. This has helped Qatalum increase its recycling from 145 tonnes in 2012 to more than 8,000 tonnes in 2013.

Subsector Performance

Three of the six subsectors that provided data for recycling have shown increased levels of waste recycling. Of those, the mining, minerals and other subsector contributed 87.9% of the sector's total recycling in 2013; with Qatar Steel accounting for almost 99% of the subsector's recycling. Qatar Steel have succeeded in achieving this by implementing several recycling and reuse programmes, including Cold Briquetting Plant for the recycling of dust from operations, and disposal of slag by reusing it for road construction.

The refining subsector increased waste recycled or reused by 56% in 2013. The most significant contributor was ORYX GTL's waste recycling which increased by 75%.

Percentage Recycling - Select Subsectors



**Calculated on a weighted basis for 26 comparable companies reporting from 2012 and 2013*

- Mining and Metals
- Full Sector
- Petrochemicals
- Refining
- Support

AIR EMISSIONS

Qatar faces a challenge to maintain air quality while continuing to increase industrial production. This includes reducing the negative impact of air pollution on the environment and human health, especially when air emissions are combined with the high level of dust that are a feature of Qatar's climatic conditions.

Air emissions arising from the energy and industry sector can be classified into two groups: greenhouse gas emissions (which are covered within the climate change chapter of this report), and non-greenhouse gas emissions, which include:

- Nitrogen oxides (NOx).
- Sulphur oxides (SOx).
- Volatile organic compounds (VOCs).

Acceptable emission levels are set for companies within the sector through the Consent to Operate (CTOs) issued by the MoE. DG continues to provide specific guidance to the sector in line with the NDS. The sector is aiming to achieve air emission reductions primarily through investments in air emissions monitoring and control systems, in addition to investment in clean technologies. Two companies in the sector have outlined clearly in their five-year sustainability strategy a goal to reach single digit NOx and SOx emissions by 2016, while another company is aiming for NOx emissions reductions of 75.5% by 2018. Additionally, five companies have stated in their strategy a plan to implement initiatives to control and reduce air emissions.

NOx Emissions

Nitrogen Oxides (NOx) are a group of polluting, highly reactive gases emitted during combustion from industrial sources such as power plants, industrial boilers, cement kilns and turbines as well as automobiles, trucks and various non-road vehicles. NOx gases play a major role in the atmospheric reactions with volatile organic compounds (VOC) to produce ozone (smog) on hot summer days.

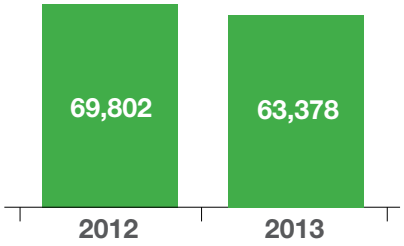
A total of 31 companies reported 63,378 tonnes of NOx emissions in 2013, a decrease of approximately 9% compared with 2012. Of the 31 companies that provided comparable data, fourteen reduced their emissions.

In 2013, the LNG/NG subsector was the largest contributor of NOx emissions, responsible for around 31% of the sector's total NOx emissions. It also reported the largest reduction in NOx emissions, of 17%, cutting 4,059 tonnes from 2012 to 2013. Twenty six percent of the sector's NOx emissions were from the oil and gas subsector, which reduced its emissions by 17% from 2012. Six subsectors reported lower NOx emissions in 2012 compared to 2013, while two subsectors reported higher emissions.

Good examples of NOx emission reduction projects include Qatargas, who have continued to implement a Compliance Action Plan for NOx Emissions Reduction at its QG1 LNG facility to meet revised NOx emissions requirements of MoE. RasGas continued a programme to retrofit low-NOx technology to turbines and boilers built before 2005. This initiative, developed with the MoE, began in 2007. It will ensure that all existing and applicable combustion units will meet regulatory limits by 2016.

Total NOx Emissions

(Tonnes)



**For 31 comparable companies reporting in 2012 and 2013*

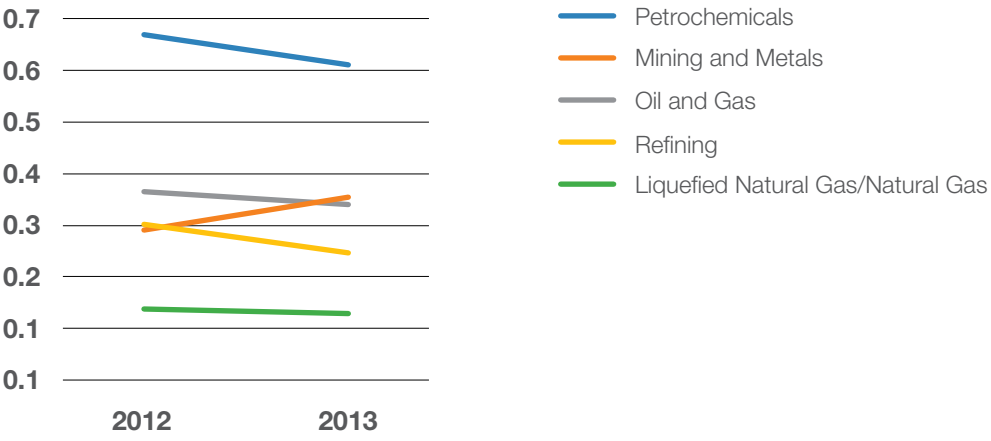
NOx Intensity

NOx intensity is measured in kilograms of emissions per unit of production. Five out of six relevant subsectors have shown improved performance regarding NOx intensity, with only the mining, minerals and other subsector increasing NOx emissions per unit of production. Petrochemicals and chemicals remains the highest emitter of NOx per tonne of production.

In 2013, the most significant intensity improvement was achieved by the refining subsector in which one company increased production by 32%, leading to a drop in the subsector intensity.

NOx Emissions Intensity

Kg of NOx emitted per Tonne of Production



For 19 comparable companies reporting in 2012 and 2013

SOx Emissions

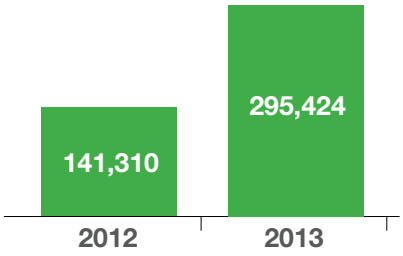
SOx refer to all sulphur oxides, including sulphur dioxide (SO_2) and sulphur trioxide (SO_3). SOx can be formed naturally, but man-made sources of sulphur dioxide include sour gas processing, oil sands production, coal combustion, ore refining, chemical manufacturing and other fossil fuel processing and burning.

Thirty companies from the sector reported SOx emissions of 295,424 tonnes in 2013, a 109% increase in emissions over 2012. Around 81% of total SOx emissions in 2013 were generated by the oil and gas subsector, which recorded a 231% increase in emissions over 2012. The vast majority of this increase is related to the shutdown and start up of a large Sulphur Recovery Unit (SRU), while the remainder is a combination of seven companies increasing SOx emission levels.

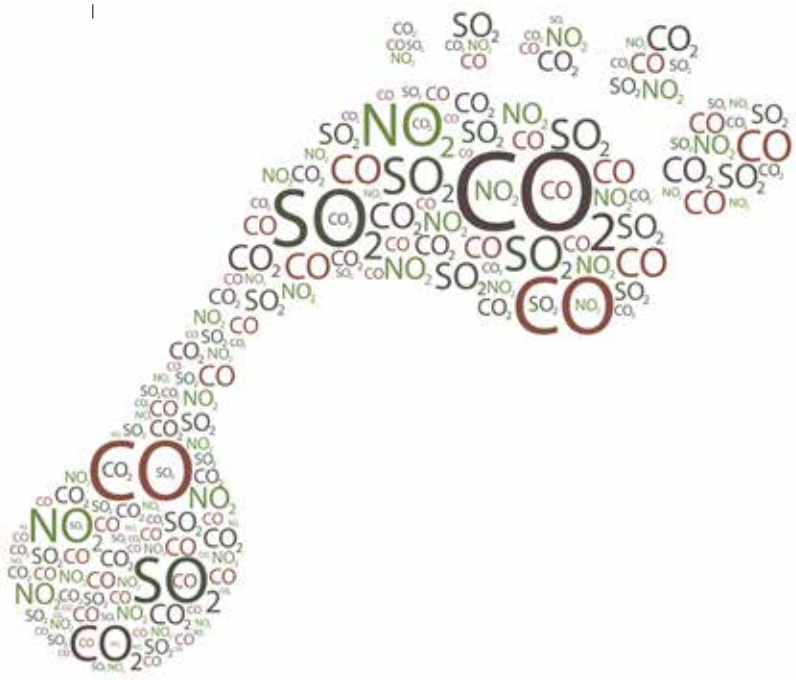
The major reductions in SOx emissions came from four companies: Wintershall, RasGas, QChem and Ras Laffan Olefin Company (RLOC). The largest reduction in emissions was achieved by RasGas and QChem with 5,014 and 4,523 tonnes respectively.

Total SOx Emissions

(Tonnes)



For 30 companies that presented two years comparable data.

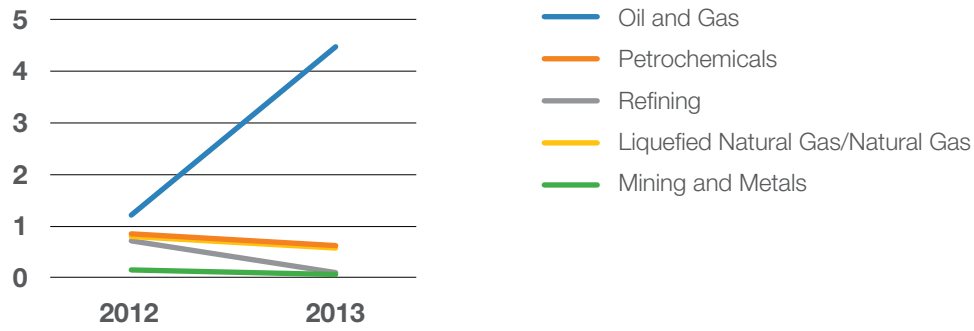


SOx Intensity

SOx intensity numbers reflect almost the same results as the subsector performance; the oil and gas subsector was the only subsector in which the intensity increased, as a result of one shutdown event. All the other subsectors have improved in 2013, with the mining, minerals and other subsector improving by more than 50%.

SOx Emissions Intensity

Kg of SOx emitted per Tonne of Production



**For 18 comparable companies reporting in 2012 and 2013*

VOCs

Volatile organic compounds (VOCs) are organic compounds that vaporise in the atmosphere and may participate in the formation of ground-level ozone. The extent of VOC emission reporting is not sufficient to carry out sector-wide analysis.

Companies across the sector take systematic preventative measures to detect, monitor, and prevent releases of VOCs. Initiatives to reduce VOC emissions include ORYX GTL, which implemented a leak detection and repair programme that identifies VOC leaks and initiates repairs. The system has enabled ORYX GTL to identify 184 leaks. As a result, the maintenance team stopped 70% of leaks, resulting in a 70% reduction in fugitive emissions (from 280 tonnes to 84 tonnes). Since 2011, Dolphin Energy has implemented a VOC Fugitive Emissions Monitoring programme for equipment and components at the onshore gas plant in Ras Laffan City, as mandated by the MoE.

RasGas has implemented a plant-wide leak detection and repair programme since 2007 that uses hand-held infrared cameras for VOC leak identification. The technology delivers real-time thermal images of gas leaks, otherwise invisible, but seen through the camera as black or white 'smoke' images. RasGas's environmental monitoring team has identified, tagged and monitored more than 22,000 LDAR components covering Trains 1–6 and AKG-1 and 2. This programme enables effective monitoring, reduces product loss and improves process safety performance. It also decreased VOC emissions by 12 percent in 2013.

BIODIVERSITY

Biodiversity in Qatar is under threat from a wide range of human activity. In Qatar, 31 species, including the Arabian Oryx, the green turtle and the brown shark, are categorized as threatened with extinction. Qatar has sought to adopt policies that protect and promote biodiversity in accordance with international conventions, such as the 1992 Convention on Biological Diversity, which Qatar ratified under Decree No. (90) in 1996.

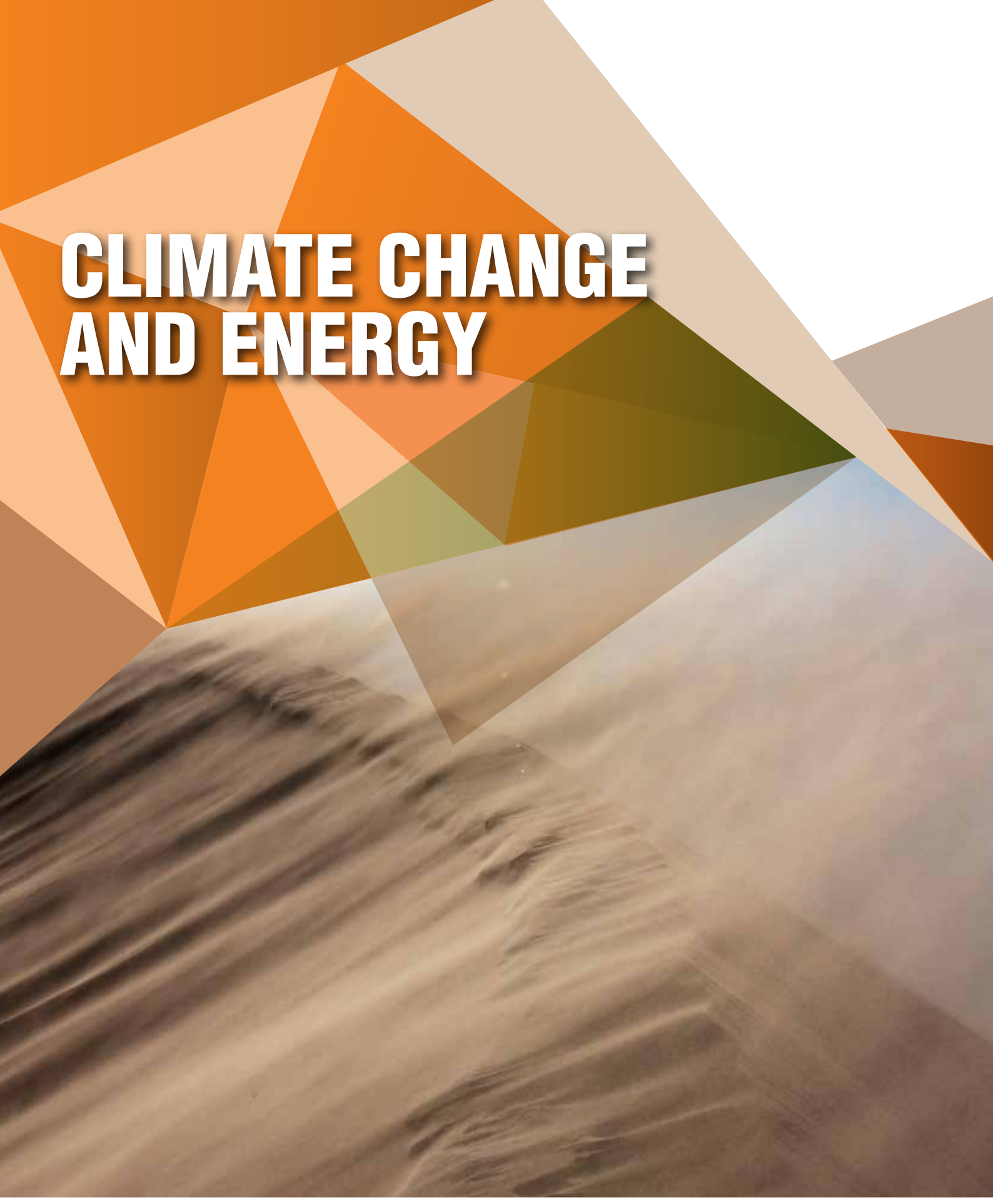
The energy and industry sector recognizes that its continuing business success, including gaining access to new resources, depends on its ability to explore for and develop reserves without adversely affecting the natural environment. Companies within the sector are therefore seeking to integrate biodiversity considerations into their everyday business practices and operations. Doing so helps minimise risks and enables companies to make a positive contribution to conservation, onshore and offshore.

One of the major effects of the sector comes from its water discharge to the sea, in which temperature and salinity can have a significant effect on fragile marine ecosystems. The energy and industry sector has set a commitment to work towards "near zero" water discharge into the sea. While there is much to be done to achieve this goal, efforts are being made to reduce the impact of wastewater discharged to sea through monitoring effluent composition and water discharge temperatures.

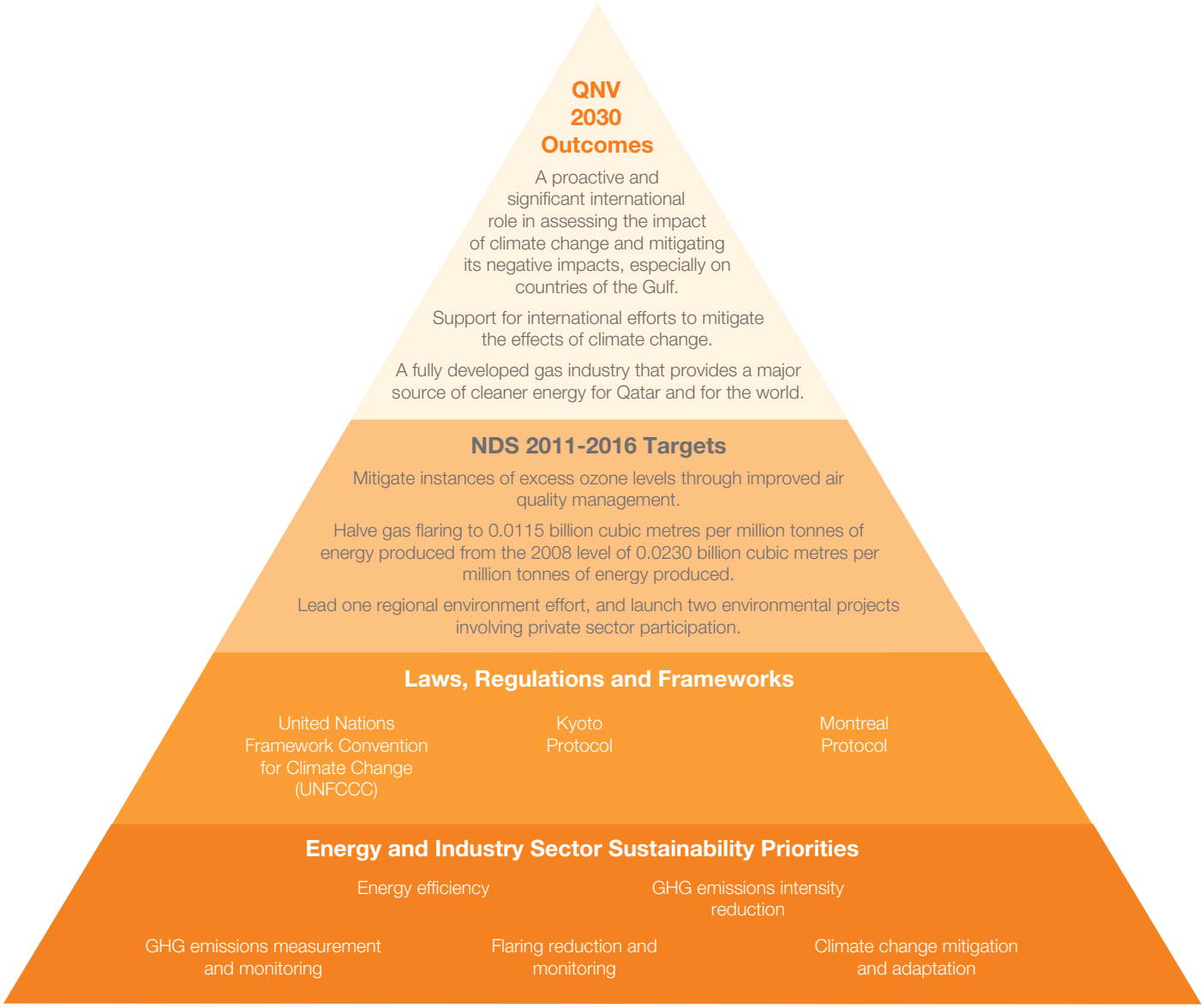
The effects of ballast water from an increasing number of ships transporting LNG and other goods to and from Qatar can also have a major impact on marine ecosystems. DG recommended steps to safeguard against the potential for a major incident and issued the Guidelines for Ballast Water Management. Shipping companies within the sector have implemented ballast water management plans that minimise the use of ballast water and promote mid-ocean ballast exchange whenever possible.

Maersk Oil	**Researching the Marine Environment** In 2013, Maersk Oil continued to support research projects that explore the diversity of marine species in Qatari waters, in partnership with the Qatar Ministry of Environment. The company's flagship initiative is the Qatar Whale Shark Research project, which involves satellite tagging of whale sharks and the deployment of other detection equipment around its platforms. The aim is to understand more about the behaviours, life cycles and migratory patterns of these majestic animals, of which little is currently known. The project was the subject of a BBC documentary in 2013.
	Whale Shark Research in 2013 Maersk Oil launched 12 one-day trips to the Al Shaheen field, deploying satellite tags, acoustic receivers and acoustic tags, collecting tissue samples and identifying individual sharks – the project has identified more than 400, many of them logged in the global database (www.whaleshark.org).
Bunduq	**Qatar – UAE Artificial Fish Reef** The Artificial Fish Reef Project is an effort to reverse years of environmental damage through the creation of an artificial fish reef in the El Bunduq Oil Field, between Abu Dhabi, UAE and Qatar. The reef was installed in 2013 and was constructed using 129 tonnes of Recycle Ecology Sulphur (RECOSUL) blocks. Monitoring will continue into 2016, but already the reef has become a nursing habitat for juveniles and immature fish in the Arabian Gulf.
QAFCO	**Artificial Reef Installation** QAFCO has taken the initiative to reduce the impact of industrialization on the marine environment by deploying artificial reef balls in selected sites close to the Sealine beach in Mesaieed. There has been a significant build-up of coral and recovery of coral reefs has been observed in the area.
Qatargas	**Awareness and Education** Qatargas is engaged in a range of environmental education programmes with schools in Qatar. The company continued to support the annual QP Environment Fair which focuses on helping children and students understand the importance of environmental conservation.
RasGas	**Marine Mammals and Sea Turtles Observation Programme** This initiative aims to minimise the impact of the Barzan Gas Project on marine mammals by providing a structured programme for marine mammal observation, including daily logging of mammal sighting, and accompanying mitigation measures.

CLIMATE CHANGE AND ENERGY



Energy | Climate Change
Flaring



2013 Achievements

3% reduction in natural gas used per tonne of production

10% reduction in electricity consumption per capita in Qatar

13% reduction in flaring

ENERGY

Global energy demand has never been higher.[3] As the world's largest exporter of Liquefied Natural Gas (LNG), Qatar is a significant provider of cleaner and price-competitive energy in the global market. With lower emissions when combusted than other fossil fuels such as coal, natural gas provides a cleaner alternative in major markets such as power generation.

Qatar currently exports more than 85% of the natural gas that it produces.[4] While production has increased across the energy and industry sector, there has been a moratorium on new extraction projects in Qatar's North Field until 2015 to ensure that supply is used responsibly and in line with long term strategic plans towards economic diversification. At the heart of these plans is the development of downstream, value-added industries such as metals and petrochemicals. Growth of the refining and gas-to-liquid sectors has increased the availability and variety of energy products within Qatar's portfolio and created new opportunities for expanding downstream and export industries.

> "Development will be carried out with responsibility and respect, balancing the needs of economic growth and social development with the conditions for environmental protection."
>
> **- Qatar National Vision 2030**

Qatar's ambitious vision for the future necessitates that energy resources are managed in a way that balances economic return with impact mitigation. The energy and industry sector has the responsibility to use the nation's abundant resources effectively and efficiently so that development can continue now and into the future.

Sector Energy Context

The production and use of natural gas and associated gases lie at the heart of Qatar's energy and industry sector. As the feedstock for much of Qatar's value-added products, natural gas is an essential component of the country's successful economic diversification into downstream markets such as petrochemicals, chemicals and metals.

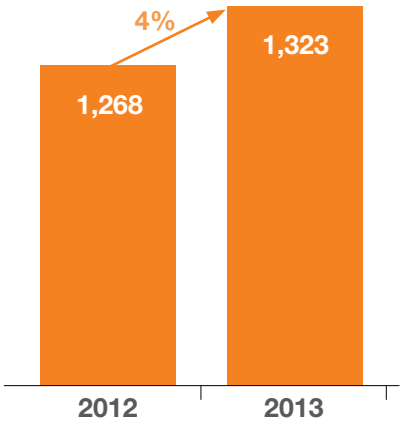
The consolidated nature of Qatar's energy and industry sector – operating primarily from four locations, Ras Laffan, Mesaieed, Dukhan and the North Field – allows Qatar to make efficient use of the raw materials available to create maximum economic value. The concentration of operations in four main locations enables companies to share large-scale infrastructure, as well as easily distribute by-products, in order to make best use of all the natural gas and associated feedstocks.

Sector Energy Usage

Direct energy consumption (use of fuels on-site) represents 90% of the energy consumed by companies in the sector. The LNG/NG subsector is the predominant consumer, using 44% of the total energy consumed. This is to be expected given that Qatar is the largest exporter of LNG in the world.

Increased energy consumption in four of the seven subsectors resulted in 4.4% growth in net energy consumption for the 25 companies that reported data for 2012 and 2013. This increase can be attributed partly to instability in some subsectors leading to unplanned shutdowns, but also to increased production from many subsectors, including the refining and petrochemicals and chemicals subsector, and the scaling up of a number of production facilities.

Total Energy (Terajoules)



For 25 comparable companies reporting on direct and indirect energy in 2012 and 2013.

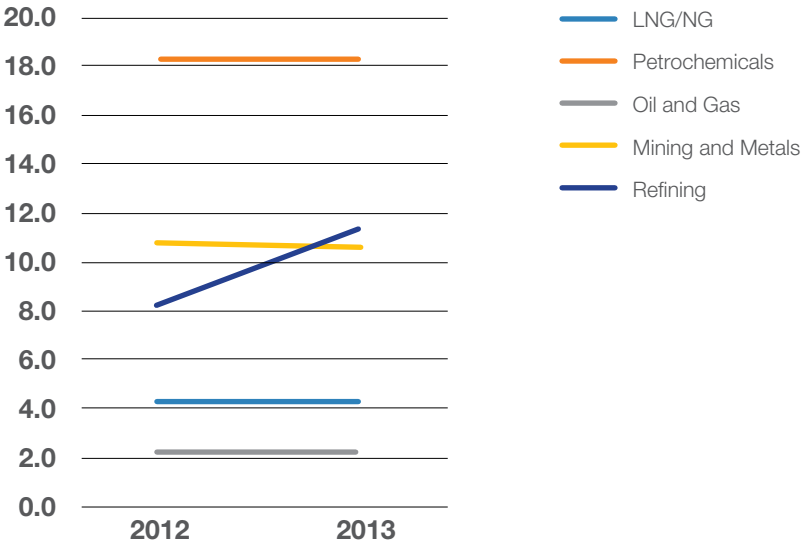
[3] U.S. Energy Information Agency (EIA), International Energy Outlook 2013. http://www.eia.gov/forecasts/ieo/world.cfm
[4] U.S. Energy Information Agency (EIA), Qatar Country Analysis, January 30, 2014. http://www.eia.gov/countries/country-data.cfm?fips=qa

Energy consumption and efficiency will continue to be a topic of national significance from economic, social and environmental perspectives. Alongside the growth in net consumption of energy in 2013, the sector also improved its energy efficiency, measured in terms of GJs consumed per tonne of product produced. Improvements in energy intensity in five of six subsectors contributed to the sector-wide improvement in energy efficiency. However, the refining subsector increased its net energy usage by 70% in 2013 and its energy intensity by 36%. This significant change is largely attributed to unplanned plant shutdowns within the subsector.

Opportunities exist for further improvement in energy efficiency within operations. For example, since QAPCO's newest LDPE plant began operations, energy efficiency has improved significantly. In 2013, energy intensity for QAPCO polyethylene production improved by 26% as a result of new technologies within the plant. Further operational improvements are expected for QAPCO over the next four years as major plans to retrofit boilers and cracking furnaces are carried out.

Energy Intensity

GJ of energy per tonne of production



**For 18 comparable companies reporting in 2012 and 2013*

Energy Use

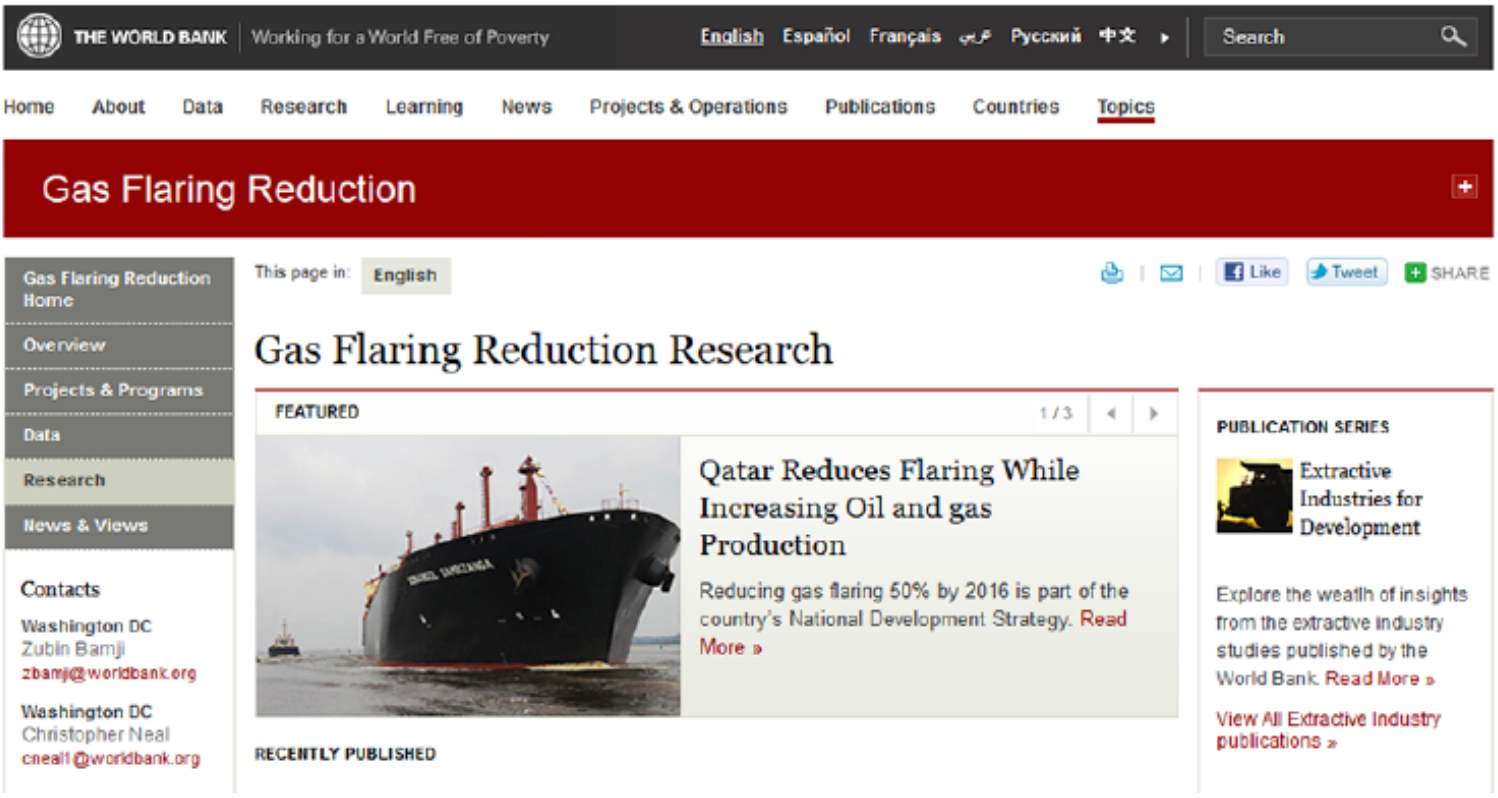
Subsector	Comparable Companies	Energy Use (GJ)		
		2012	2013	% Change
Liquefied Natural Gas/Natural Gas	3	584,800,915	585,598,140	+0.1%
Petrochemicals and Chemicals	7	238,917,271	269,208,157	+12.7%
Power and Utilities	4	217,052,148	215,784,602	-0.6%
Oil and Gas (Exploration and Production)	6	100,252,526	89,985,230	-10.2%
Mining, Minerals and Other	2	72,039,124	70,394,271	-2.3%
Refining	2	54,259,447	92,056,832	+69.7%
Transport, Storage and Distribution	1	275,532	311,775	+13.2%
Full Sector	**25**	**1,267,596,963**	**1,323,339,007**	**+4.4%**

2013 Energy Use Breakdown				
Subsector	**Comparable Companies**	**Direct Energy (GJ)**	**Indirect Energy (GJ)**	**Total Energy (GJ)**
Liquefied Natural Gas/Natural Gas	3	580,763,931	4,834,209	585,598,140
Petrochemicals and Chemicals	7	264,306,511	4,901,646	269,208,157
Power and Utilities	4	99,776,344	116,008,258	215,784,602
Oil and Gas (Exploration and Production)	6	89,139,454	845,777	89,985,230
Mining, Minerals and Other	2	63,076,928	7,317,343	70,394,271
Refining	2	91,892,629	164,203	92,056,832
Transport, Storage and Distribution	1	250,139	61,636	311,775
Full Sector	**25**	**1,189,205,936**	**134,133,071**	**1,323,339,007**

Natural Gas – Qatar's Fuel

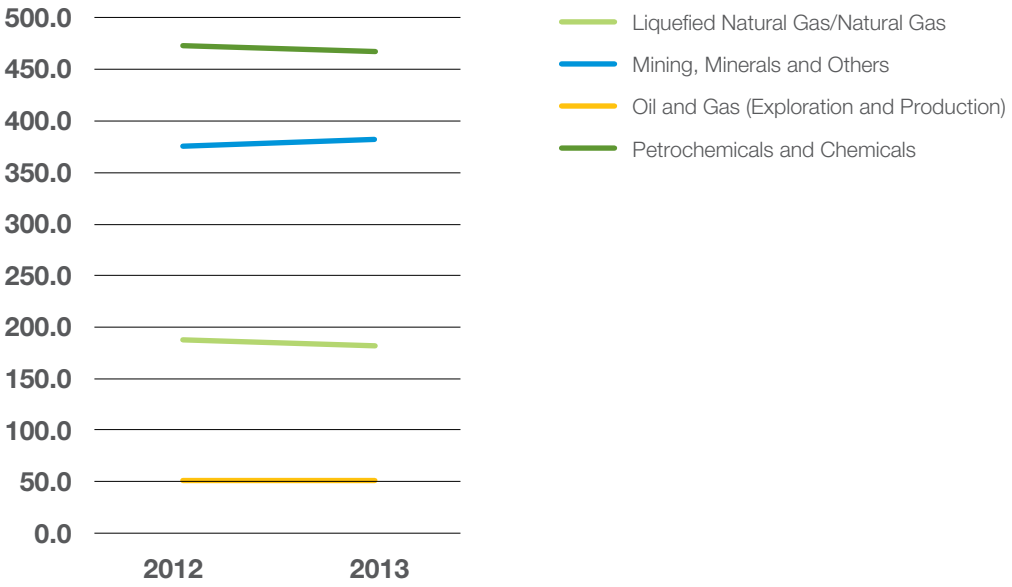
Natural gas use per unit of production is a critical indicator of operational efficiency within the sector. With a net decrease in consumption of natural gas by 2% in 2013, four out of five subsectors improved natural gas intensity over the same period, the sector is moving in a positive direction by advancing efficient use of natural gas.

Four of the five relevant subsectors improved their natural gas intensity in 2013, with the LNG/NG subsector, the largest consumer of natural gas, achieving a 5% improvement. It is evident that the intensities for production vary significantly across subsectors, with the refining subsector consuming more than 10 times the natural gas per tonne of production than the LNG/NG subsector. While performance analysis shows a positive trend in feedstock efficiency and overall energy efficiency, progress towards further efficiency gains must continue as part of Qatar's commitment to using its energy wealth in a responsible manner.



Natural Gas Consumption Intensity

Cubic metres per tonne of output



**Calculated on a weighted basis for 18 companies reporting on Natural Gas and Production both in 2012 and 2013.*

Natural Gas

Subsector	Comparable Companies	Natural Gas Used (m^3)		
		2012	2013	%Change
Liquefied Natural Gas/Natural Gas	3	26,620,822,889	25,269,382,478	-5.1%
Petrochemicals and Chemicals	8	6,567,128,681	7,263,513,829	+10.6%
Power and Utilities	4	5,897,710,416	5,865,114,338	-0.6%
Mining, Minerals and Other	2	2,550,662,136	2,687,780,761	+5.4%
Refining	1	2,919,944,744	2,598,532,211	-11.0%
Oil and Gas (Exploration and Production)	6	2,502,183,557	2,262,488,161	-9.6%
Full Sector	**24**	**47,058,452,423**	**45,946,811,778**	**-2.4%**

Electricity Generation and Consumption

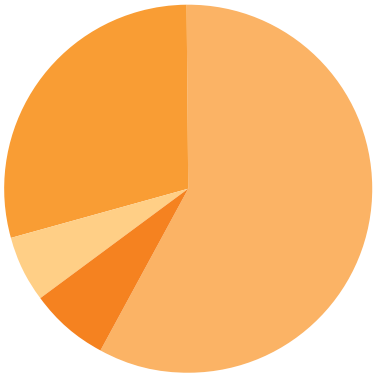
Indirect energy consumption, in the form of electricity, is a small portion of the total energy consumed by the sector. In 2013, it represented 10% of total energy for 25 relevant reporters. Despite its minimal role in overall energy consumption within the sector, electricity is the most tangible form of energy use and thus plays a key role in setting the tone for the general populations' understanding and relationship with energy.

"Economic development and protection of the environment are two demands neither of which should be sacrificed for the sake of the other."

- Qatar National Vision 2030

Sectoral Consumption of energy

MWh in 2013



- Industrial **29%**
- Domestic **58%**
- Auxilliary **7%**
- Transmission & Distribution losses **6%**

Indirect energy produced by the power and utilities subsector in the form of electricity, is distributed to Qatar's homes and businesses through a consolidated power grid served by five main electricity producers and one distributor, Kahramaa. As the sector's most public facing company, Kahramaa sends important signals to the public about energy efficiency and resource conservation through its actions in the fields of energy and water efficiency.

Opportunities for efficiency can be found in three main areas: electricity production, transmission, and end-use. Kahramaa leads the drive towards efficiency in these three areas through its Tarsheed programme. Tarsheed, which means responsible use in Arabic, is a multi-year programme to promote efficient use of power by households and industry, and also includes improvements to the power grid to reduce energy loss during transmission and distribution. Tarsheed has established a goal to reduce electricity consumption per capita by 20% by the end of 2016. In 2013, a 10% reduction was achieved through a coordinated effort targeting energy awareness, the promotion of energy efficient buildings, and upgrades to the energy grid.

Improvements in domestic and grid related energy efficiency is part of a move towards smarter and more efficient power use in Qatar. With the industrial sector responsible for more than one quarter of electricity consumption in Qatar, improvements in operational efficiency make a significant contribution to overall levels of efficiency. Upgrades and retro-fitting of facilities in many sectors have improved energy efficiency within many companies. Kahramaa will invest more than $22 billion in upgrades to Qatar's energy and water infrastructure. These improvements will increase the efficiency of electricity production and transmission, and provide more information about energy use trends that can inform energy reduction programmes.

Indirect energy consumption within the sector is often supplemented by on-site power generation and water production that reduce the burden on grid supply and increase operational reliability. Excess electricity generated by companies within the sector is exported to the national grid for use elsewhere in Qatar. In 2013, four companies (outside the power and utilities subsector) exported energy, including Qatalum, QAPCO, QATOFIN, QVC and Qatar Shell. The total energy exported was 146,849 MWh.

Natural gas intensity for electricity production (the amount of natural gas required to produce one MWh) increased by 2% in 2013. Increasing the efficiency of electricity production and making further improvements to the efficiency of the transmission grid will improve levels of energy efficiency in the sector.

Solar Energy Opportunities

Investigation and implementation of alternative energy technologies within the sector is a high-potential opportunity for improving not only the sector's environmental impact, but also its ability to reduce domestic consumption of natural gas. Karhamaa, Qatar's distributor of electricity and water, has made a public commitment to produce 200 MW of solar power by 2020, representing 2% of Qatar's total electricity consumption. In addition, there are a number of solar generation projects within Qatar that offer promising opportunities to further shift domestic energy consumption away from natural gas fed-sources.

CLIMATE CHANGE

Climate change is a recognized challenge for Qatar and the world. It is a global phenomenon that requires action by different players to reduce greenhouse gas emissions and adapt to impacts. In 2013, the IPCC (Intergovernmental Panel on Climate Change) started to release its Fifth Assessment Report (AR5)[5], the most comprehensive assessment of scientific knowledge on climate change. It is a significant reminder of the effects of climate change which in Qatar and the Gulf region centre on changes in land use as a result of sea level rise and increases in severe weather.

"A proactive and significant regional role in assessing the impact of climate change and mitigating its negative impacts, especially on countries of the Gulf."

- Qatar National Vision 2030

Regional and national attention has turned towards climate change in the wake of the COP 18 conference in Doha in 2012. Despite its reliance on hydrocarbons, Qatar is taking action to mitigate and adapt to climate change, through initiatives such as research into carbon capture and work to reduce greenhouse gas emissions.

With the leadership of the Doha Carbon and Energy Forum, investment in research and collaborative projects addressing climate change is increasing.

Significant funding has been dedicated to research and initiatives to build capacity to mitigate climate change. The most significant of those is the Qatar Foundation Research Institute, which was established in 2013 to support research into carbon capture and storage (CCS) technologies as well as mitigation and adaptation in the Qatar context.

Other programmes managed by the sector and private research institutions are investigating the role that reduction and offset technologies can play in Qatar. Projects currently underway include CCS applications and alternative energy implementation using solar power. Notable projects include QAFAC's Carbon Dioxide Recovery project that will capture 500 tonnes of carbon dioxide per day for re-use within the company's methanol production unit. The initiative is scheduled to begin operations in 2014.

The sector has developed a five-step greenhouse gas emissions strategy to measure and mitigate its impact on climate change. Significant progress towards climate change adaptation and mitigation continues to be made in Qatar as a result of the sector's investment in research, emissions monitoring, and collaborative emissions improvement projects.

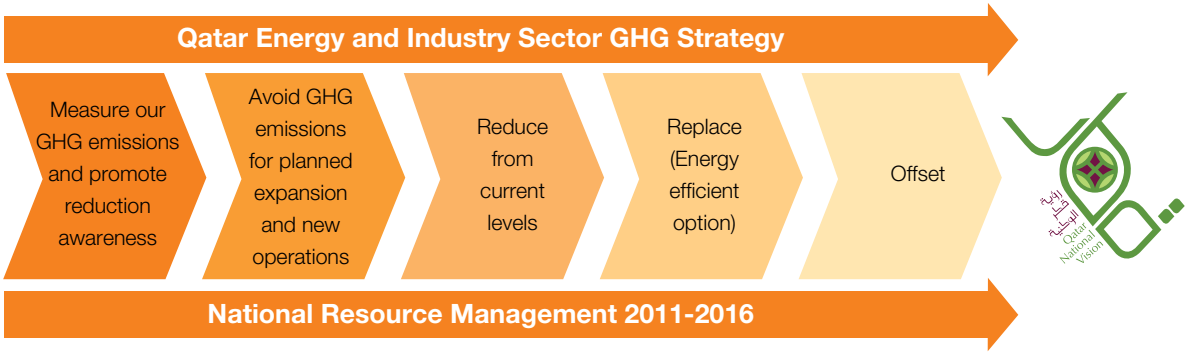
Emissions capture forms part of the sector's GHG strategy and is likely to accelerate as research advances applications of these technologies.

"The issue of climate change is still at the top of our concerns with all its ramifications to the global system as a whole. I would like to confirm the commitment of the State of Qatar to continued cooperation with the international community in facing this challenge and implementing the measures agreed upon during the 18th Conference of the States Parties to the United Nations Framework Convention on Climate Change, which was hosted by Qatar at the end of last year, in order to develop a road map for tackling the negative environmental and economic consequences of this dangerous phenomenon.

– His Highness Sheikh Tamim bin Hamad Al-Thani, Emir of the State of Qatar

Address to UN General Assembly, September, 2013
https://papersmart.unmeetings.org/media2/129095/qatar.pdf

[5] *http://www.ipcc.ch/report/ar5/*



Measurement and avoidance are key elements of the sector's GHG strategy. The sector will move towards a consolidated GHG measurement and reporting programme in 2014 that will provide a platform for better understanding the sources of emissions and, as a result, illuminate opportunities for mitigation.

Sector GHG Emissions

GHG emissions from the energy and industry sector are primarily the result of direct energy consumption through the burning and use of natural gas and other fuels. Total GHG emissions increased by 0.5% in 2013, with four of the seven subsectors registering an increase in emissions. Direct GHG emissions represent 94% of total GHG emissions in 2013, which is in alignment with the sector's energy use figures that show direct energy representing 90% of total energy consumption. The LNG subsector accounts for 47% of all GHG emissions, and registered a 0.4% increase in emissions volume from 2012 to 2013.

Emissions intensity measures kilograms of GHG emissions per kilogram of production. Five of the six subsectors have improved their GHG intensity with transport and mining showing the most improvement although accounting for a small proportion of the sector's emissions. The LNG/NG subsector accounting for most of the sector's GHG emissions reported a 0.1% increase. As progress continues towards measuring and managing GHG emissions, further improvements in emissions intensity are expected.

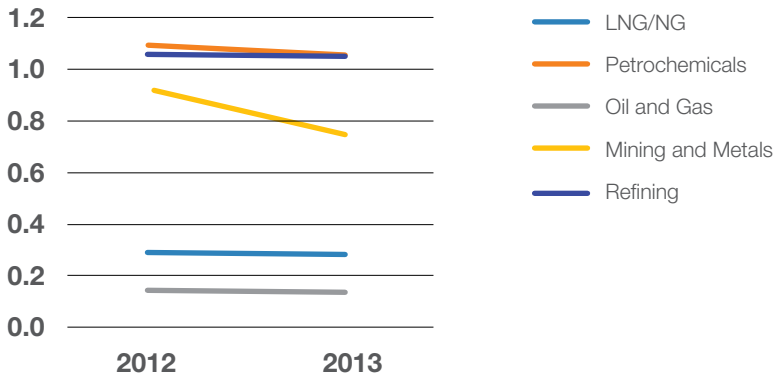
Many companies have developed and are in the midst of implementing GHG reduction strategies in alignment with the sector GHG emissions strategy. Qatargas has developed a comprehensive GHG Management Programme to assess technological opportunities for reducing emissions from its operations. The focus of its projects is on proven technologies that can be implemented in the short term (two-eight years). Strategic assessment of opportunities will continue into 2014.

The focus of many GHG reduction strategies is flaring and operational efficiency. Opportunities for emission reductions and carbon capture and storage arise as emissions reduction technologies become more widely available and experience of applying them increases. For example, RasGas, one of the largest LNG producers in the world, operates an acid gas injection scheme that stores carbon dioxide and sulphur oxides produced during operations. Annually, approximately 1 million tonnes of CO_2 are re-injected into a saline aquifer rather than emitted into the atmosphere.

Many other opportunities are still in research and development phase, but investment in new technology and research hold out the prospect of carbon reduction and reduced emissions in the long term.

GHG Intensity

Kg of CO_2e emitted per kg of production



**For 17 comparable companies reporting in 2012 and 2013.*

GHG Emissions				
Subsector	**Comparable Companies**	**GHG Emissions (Tonnes CO_2e)**		
		2012	**2013**	**% Change**
Liquefied Natural Gas/Natural Gas	3	40,779,271	40,946,112	+0.4%
Power and Utilities	5	12,665,378	12,489,103	-1.4%
Refining	2	7,602,647	9,442,520	+24.2%
Petrochemicals and Chemicals	6	6,728,591	7,119,070	+5.8%
Oil and Gas (Exploration and Production)	5	7,657,152	6,746,824	-11.9%
Mining, Minerals and Other	2	6,378,170	5,451,951	-14.5%
Transport, Storage and Distribution	1	30,525	33,653	+10.2%
Full Sector	**24**	**81,841,734**	**82,229,233**	**+0.5%**

2013 GHG Emissions Breakdown				
Subsector	**Comparable Companies**	**Direct GHG (tonnes CO_2e)**	**Indirect GHG (tonnes CO_2e)**	**Total GHG (tonnes CO_2e)**
Liquefied Natural Gas/Natural Gas	3	40,120,107	826,005	40,946,112
Power and Utilities	5	11,066,235	1,422,868	12,489,103
Refining	2	9,408,186	34,334	9,442,520
Petrochemicals and Chemicals	7	12,108,346	817,241	12,925,587
Oil and Gas (Exploration and Production)	6	6,700,678	46,220	6,746,898
Mining, Minerals and Other	2	3,698,564	1,753,387	5,451,951
Transport, Storage and Distribution	1	18,884	14,769	33,653
Full Sector	**26**	**83,120,999**	**4,914,824**	**88,035,824**

FLARING

As a significant source of greenhouse gas emissions, flaring represents a global challenge specific to the energy and industry sector. The Qatar National Development Strategy has established a goal to reduce flaring by 50% from 2008 levels by 2016. Data collected shows that significant flare reductions are being achieved, but further progress continues through dedicated flaring reduction strategies enacted on a company-by-company basis.

The sector made considerable progress in reducing flaring between 2012 and 2013. With a decrease in flared gas volume of 13% and the introduction of a number of new initiatives to realize further reductions, the sector's actions have already helped drive reductions in emissions.

Significant investment in enhancing plant reliability and stack emissions monitoring generated noteworthy reductions in flaring, with flaring intensity reduced by 13% for the sector. Further improvements in flaring reduction are expected as progress towards stack monitoring and emissions capture technologies are implemented.

Flaring performance has improved for all relevant subsectors, with petrochemicals and chemicals registering the greatest proportional change (32% reduction) as a result of fewer shutdowns in 2013. The LNG/NG subsector achieved the greatest volume decrease.

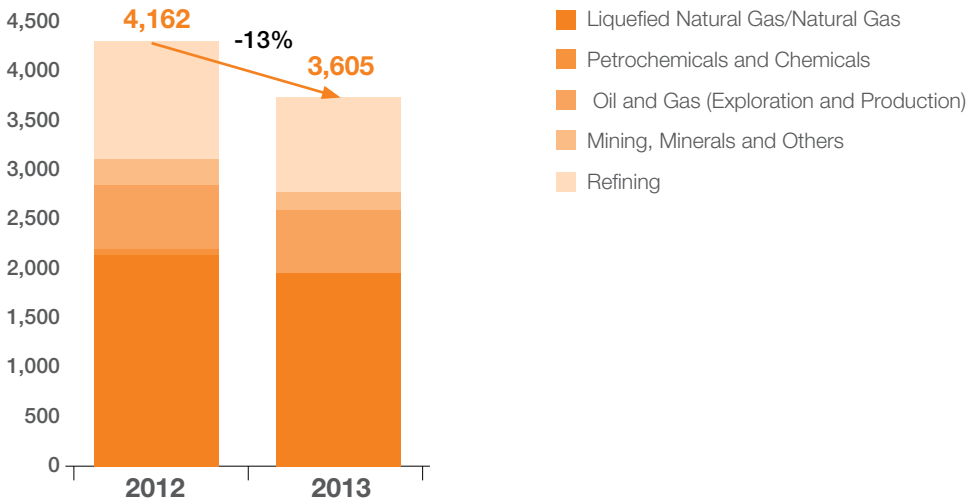
Qatargas and its partners plan to further reduce flaring volumes by 40% by 2016 through the Jetty Boil-off Gas Recovery Project, which seeks to capture 90% of flared volume from loading berths. Further investment by Qatargas in cool down gas recovery is expected to achieve more flare gas reductions once implemented. The project is at the Front End Engineering Design (FEED) stage but is scheduled to be operational by the end of 2015.

In terms of reporting, all 18 of companies for whom flaring is relevant provided data in 2013. In some cases, numbers from previous years have been re-stated to reflect improved calculation methodologies.

What is flaring?

Flaring is the release or combustion of gases for process safety and operational reasons. It is initiated to purge production lines of excess gases in order to protect personnel and assets from potential hazards including explosion. Flaring is also initiated during start up and shut down of a production line.

Flaring 2012-2013 (MMSCM)



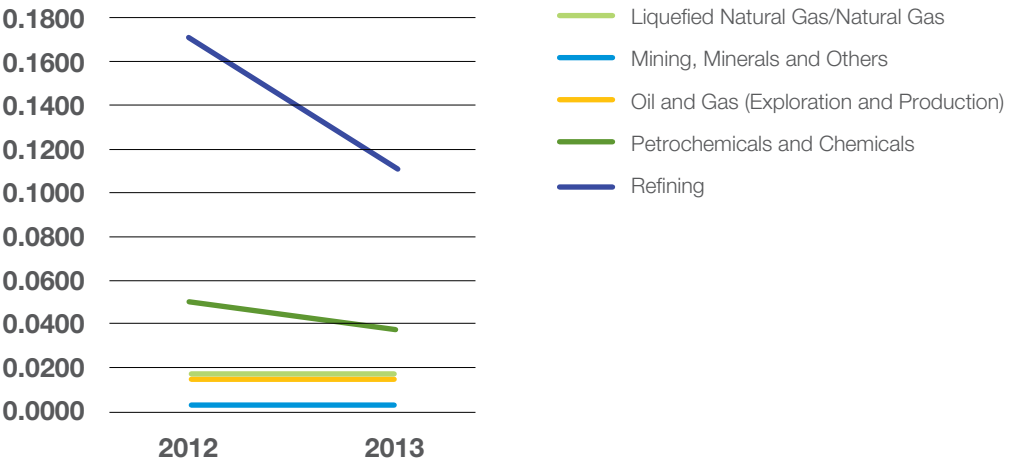
Partnership between Qatar Petroleum and the World Bank Global Gas Flaring Initiative

Building on the success of the training provided on flare measurement and reporting, the partnership has progressed to implement studies that will build capacity and disseminate best international flare reduction practices. This new phase of the partnership is working towards delivering the following outcomes:

- Providing relevant international benchmarking to enable operators to compare their flaring performance.
- Gathering and Disseminating best practices in design, technology, operation, maintenance/ inspection, and management processes to mitigate all sources of gas flaring within the sector.
- Developing a flare reduction guideline for voluntary use by companies.
- Reviewing the applicability of GGFR studies on technical and commercial solutions to reduce flaring, and consulting on options via workshops and seminars.

Flaring Intensity

BCM per tonne of output



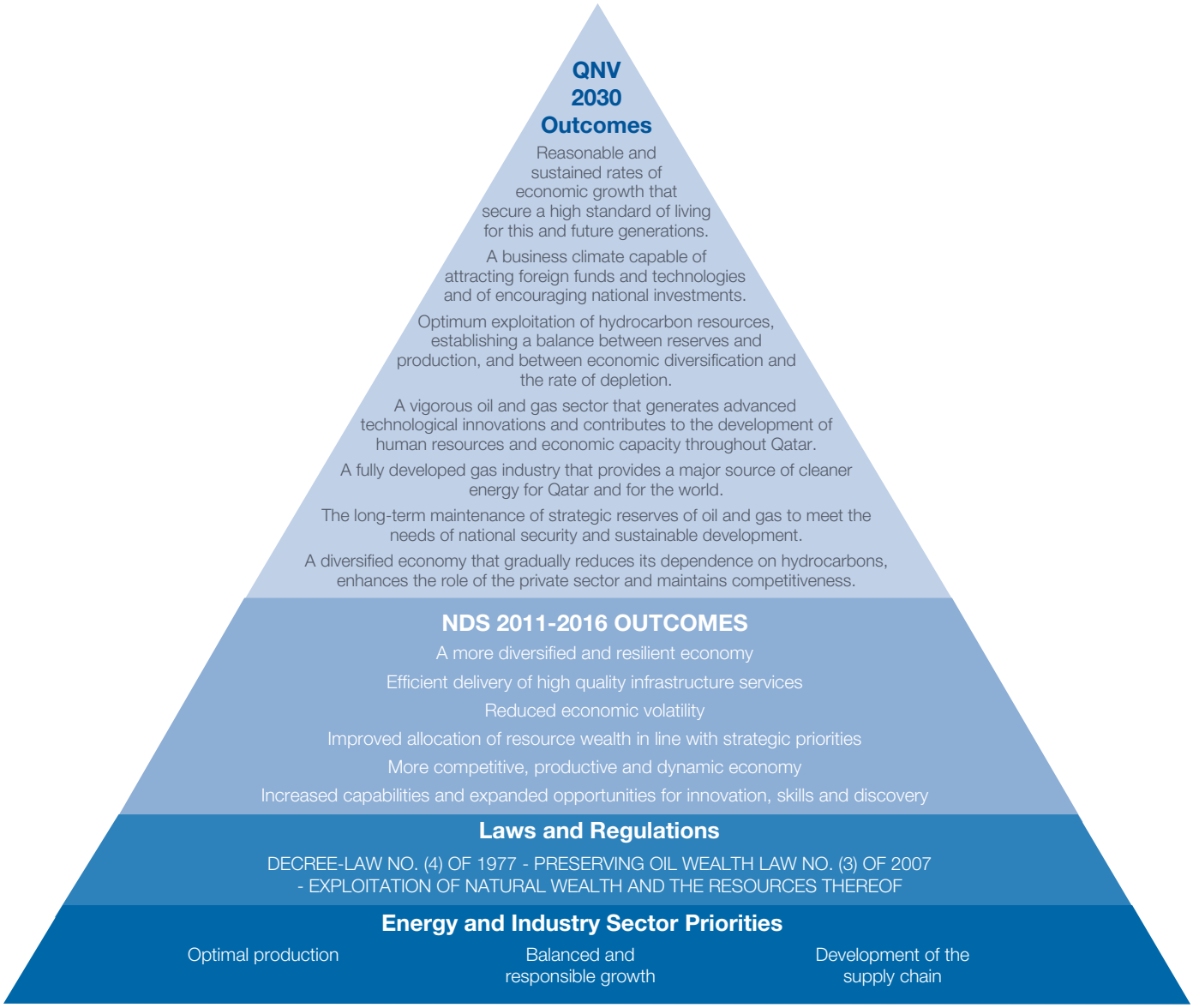
**Calculated on a weighted basis for 16 companies reporting on Floating and Production both in 2012 and 2013.*

Flaring

Subsector	Comparable Companies	Flaring (MMSCM)		
		2012	2013	% Change
Liquefied Natural Gas/Natural Gas	3	2,082.4	1,884.0	-9.5%
Refining	2	1,148.0	926.0	-19.3%
Oil and Gas (Exploration and Production)	6	668.5	614.8	-8.0%
Petrochemicals and Chemicals	6	262.5	179.7	-31.5%
Mining, Minerals and Other	1	1.0	0.9	-14.7%
Full Sector	**18**	**4,162**	**3,605**	**-13.4%**

ECONOMIC PERFORMANCE

Contribution To National GDP | Sector Production and Expansion
Economic Diversification | Indirect Economic Impact



2013 Achievements

6.4%
increase in revenues

1,174
new jobs created

60%
median local procurement spending

CONTRIBUTION TO NATIONAL GDP

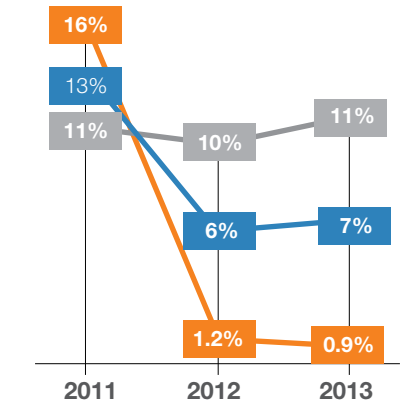
The energy and industry sector has been at the heart of Qatar's rapid economic development, generating economic growth from the country's abundant hydrocarbon resources. Qatar's economy continued to expand in 2013, albeit at lower rates than in the past decade. Real GDP growth increased slightly from 2012 levels to 6.5%.[6] Aggregate economic demand increased as a result of stronger investment across different industries and strong population growth of 10.5%.[7] The State also maintained a high current account surplus (31% of GDP) despite stabilizing production levels.[8] This was the result of strong export prices that sustained export levels.

Despite continued economic growth, Qatar's energy sector is starting to move from a phase of rapid growth to more stable maturity. Reports from the Ministry of Development Planning and Statistics indicated a rise of 6% in real GDP during 2013, and project that "upstream oil and gas is expected to contract as output from maturing oil fields tapers off and gas production hits installed-capacity limits."[9] In the immediate term, this translates to an anticipated real GDP growth rate of 4.5% in 2014. Energy prices are expected to remain strong despite declining from historical levels, and significant growth is still expected from the metals and manufacturing industries.[10] Nonetheless, trends of "low and declining productivity"[11] make economic diversification, fiscal planning, and competitiveness key tenets of a continued prosperous economy.

Economic Highlights:

- Economic diversification efforts showed signs of success, with 93% of real GDP growth coming from the non-hydrocarbon sector.
- In 2013-14, Qatar was ranked first among countries of the Arab World in the World Economic Forum's competitiveness rankings, and first in Bloomberg's global rankings of best frontier markets.

Real GDP Growth



Source: QNB April 2014 Report

Direct Wealth Generation

Revenue from the energy and industry sector has a considerable impact on Qatar's GDP. While the rate of revenue growth has slowed over past years due to stabilizing production, the sector has continued to deliver nominal increases in revenue. According to data provided for this report, companies reporting comparable data saw their financial turnover increase in 2013 by 6.4% from 2012 levels. The 24 reporting companies collectively generated revenue of 152 billion USD. The largest relative gains came from the LNG/NG and power and utilities subsectors. With land exports of gas averaging nearly $110 per barrel, government revenue expectations were surpassed even though levels of output remained constant.[12]

Revenues from natural gas represent the majority of the sector's financial turnover (57%), making LNG prospects particularly important to Qatar's future. Growing competition in global LNG markets will mean that Qatar will be competing with new entrants from the USA, Canada, Australia, and pipeline gas producers such as Russia. Securing trade deals with new importers, primarily in East Asia, where demand for LNG is anticipated to increase, will be critical

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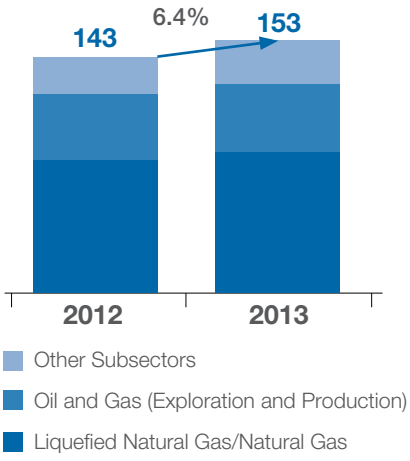
[6] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 3.*
[7] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 4.*
[8] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 5.*
[9] *Ministry of Development Planning and Statistics, "Qatar Economic Outlook: 2013-2014", 2013, 1.*
[10] *Ministry of Development Planning and Statistics, "Qatar Economic Outlook: 2013-2014", 2013, 1.*
[11] *Ministry of Development Planning and Statistics, "Qatar Economic Outlook: 2013-2014", 2013, 2.*
[12] *U.S. Energy Information Administration, "Qatar", http://www.eia.gov/countries/cab.cfm?fips=QA, accessed May 9, 2014.*

to ensuring continued revenue growth. Continued economic diversification, along with government medium-term financial planning, is set to help secure fiscal balance and reduce exposure to the volatility and uncertainty that can surround hydrocarbon revenues.

Although growth in hydrocarbon production has stabilized, prospects for short-term revenue generation remain promising. QNB expects strong current account surpluses to continue in coming years thanks to projections of strong export receipts.[13]

Revenues (Billions of USD)



**For 24 comparable companies reporting on Revenues in 2012 and 2013.*

[13] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 8.*

SECTOR PRODUCTION AND EXPANSION

Subsector Production

With increasing global demand for energy, metals, and chemicals, production growth to meet global demand is critical to securing a prosperous future for Qatar.

The industry maintained high levels of production in 2013, producing 1.6 million barrels per day of liquid fuels.[14] This included primarily crude oils, condensates, natural gas plant liquids, and GTL. Hydrocarbon production remained steady owing to the fact that facilities ran at full capacity, with growth in gas production mildly offsetting the decline in production of crude oils. The government moratorium on further exploration, which has limited new entrants to the market, effectively rendered levels of output identical to 2012 for upstream subsectors. Nonetheless, spot prices on traded commodities such as Brent crude remained high (averaging $109 USD)[15] thereby securing higher financial turnover than 2012.

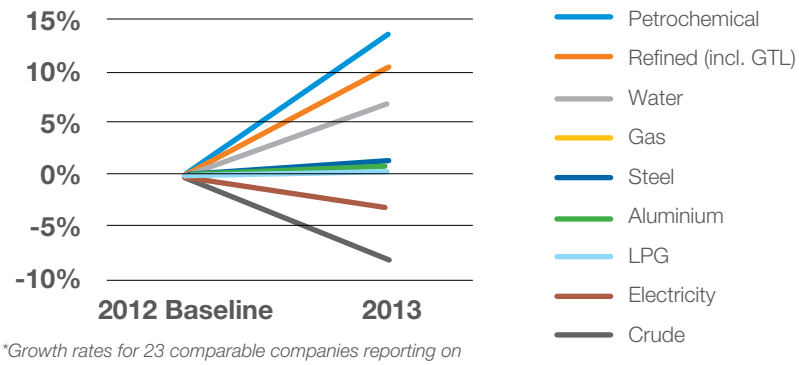
In line with macro-economic trends, the majority of reported output growth in 2013 came from the refining and petrochemical subsectors. Of all product types, petrochemical production experienced the highest year-on-year growth (13%). This was followed by refined products (10%) and water (6%).

Helium production grew by 55%. Crude oils and electricity declined modestly in comparison to 2012 levels, in line with trends that saw production of non-crude liquids overtake crude oils in 2012.[16] Recent announcements by Kahramaa to invest 7.5 billion QAR in developing a new electricity network gave optimism that future electricity output would increase.

Due to increasing scale and global competition, Qatar has taken steps to improve the marketing of its increasingly diverse portfolio of products. Muntajat was created in 2012 to consolidate the marketing, sales and distribution activities of the chemicals and petrochemicals subsector within a single company that could thereby gain greater market power and establish dedicated expertise. Efforts like this have already helped consolidate the Qatar brand of products and capture 90% of the subsector's output.

High levels of investment in the wider sector are expected to continue in coming years. According to QNB economists, government spending on the Oil and Gas sector is anticipated to average 2.4 billion USD per year until 2016.[18] Petrochemical companies and other private sector enterprises are expected to make similar levels of investment, building on new projects and initiatives launched in 2013.[19] These ventures will help to ensure that high levels of economic output are maintained.

Growth Rates by Production Type



**Growth rates for 23 comparable companies reporting on production in 2012 and 2013.*

**2012 values of 0% represent the baseline year to which 2013 is compared.*

[14] *U.S. Energy Information Administration, "Qatar", http://www.eia.gov/countries/cab.cfm?fips=QA, accessed May 9, 2014.*
[15] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 3.*
[16] *U.S. Energy Information Administration, "Qatar", http://www.eia.gov/countries/cab.cfm?fips=QA, accessed May 9, 2014.*
[18] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 7.*
[19] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 7.*

Production							
Product Type	Unit (Millions)	Elements Included in Product Type	2-Year Comparable Companies				
			# Subsectors	# Companies	2012	2013	Change
Aluminium	Tonnes	Aluminium	1	1	0.6	0.6	+1.0%
Steel	Tonnes	Steel Bar, Steel Billets, DRI, HBI	1	1	6.2	6.3	+1.5%
Crude	Tonnes	Crude oils, oil equivalent, and associated condensates	1	4	43.6	40.3	-7.7%
Gas	Tonnes	Natural Gas (including LNG), Pentane, Ethane, Helium	3	5	117.8	119.5	+1.5%
Refined	Tonnes	Gasoline, Kerosene, Waxes, Naphtha, Gasoil, GTL Gasoline, GTL Naphtha, and lubricants	2	4	10.5	11.6	+10.0%
LPG	Tonnes	Butane, Propane, and associated condensates	2	3	32.5	32.7	+0.6%
Petrochemical	Tonnes	Ammonia, Caustic, EDC, HCl, LDPE, LLDPE, MBTE, MOEH, Urea, VCM, MDPE, HDPE, NAO and 1-Hexene	2	11	15.4	17.4	+12.8%
Water	m^3	Water	1	3	148.3	158.1	+6.6%
Electricity	mWh	Electricity	1	4	21.3	20.7	-2.9%

Natural Gas

Natural gas is Qatar's most important export. The country is the fourth largest dry natural gas producer in the world,[20] and is the leading global exporter of LNG. These hydrocarbon resources originate mainly in Qatar's North Field, the location of the single largest deposit of dry (or 'non-associated') gas. In just a few decades, Qatar has built a network of partners and infrastructure to monetise and gain economic value from these resources.

Production has remained steady in 2013, owing to the completion of several facilities in 2012 that began running at full capacity. Despite a stable level of output, a number of promising advances were made in the LNG market. Qatargas, for example, started first shipments to four new LNG terminals around the world, and higher LNG demand from Asia helped lift export prices.

[20] *U.S. Energy Information Administration, "Qatar", http://www.eia.gov/countries/cab.cfm?fips=QA, accessed May 9, 2014.*

Where Does Qatar Export Natural Gas?

Qatar is the second largest exporter of natural gas in the world. Currently, RasGas and Qatargas export to Belgium, Canada, China, France, Greece, India, Italy, Japan, Mexico, South Korea, Spain, Taiwan, Thailand, the Netherlands, the UAE, the UK, and the USA. Most customers are within the power and utilities industries, with the majority of these found in Asia (63%). Qatar has started to serve more spot markets to meet short-term demand, and support the construction of new regasification terminals to boost the market. With lower carbon emissions than coal and oil when combusted, natural gas is set to be a key and growing product in future as energy markets make the transition to lower-carbon alternatives in the years ahead.

With regard to conventional natural gas, Qatar plays an important regional role. The country provides neighbouring GCC states such as the United Arab Emirates (UAE) and Oman with natural gas via the Dolphin Energy gas pipeline. This has increased Qatar's profile and changed the country's strategic relations across the region.

International energy markets are increasingly competitive, highlighting the importance of Qatar securing a foothold in emerging and growth markets. Qatar's natural gas exports are currently strong ("85% of gas being traded on the UK National Balancing Point trading location is Qatari sourced"[21]), but the possibility of more competition from US exports - derived principally from shale gas - is likely to increase competitive pressure. Projections show Qatar exporting 40-50m tonnes of LNG into Asian regions in the coming decade,[22] into targets markets in India, South Korea, Indonesia, Japan, and Malaysia. Energy demand is also projected to surge in China, though its own gas production (which has been increasing at 5% annually) may make trade in natural gas more competitive.[23]

Top 10 global natural gas exporters, 2012

Country	trillion cubic feet
Russia	7.4
Qatar	4.3
Norway	3.8
Canada	3.1
Netherlands	2.1
Algeria	1.7
Turkmenistan	1.6
United States	1.6
Indonesia	1.2
Austria	1.2

Source: U.S. Energy Information Administration, International Energy Statistics

New Developments and Projects

As a result of stable production levels of oil and gas, significant development in 2013 has come from other sectors. A number of new developments and projects have been announced and government spending on infrastructure projects has accelerated.

Recent flagship projects include:

- **Bul Hanine:** QP announced that it would invest more than QR40 billion in the redevelopment of Bul Hanine offshore oil field. Once operational, this will be one of the largest operated projects by the Qatari company. The renewal of these plans is set to deploy newer technologies to raise production to optimum levels, and will introduce best-practice Improved Oil Recovery Techniques. Some 150 new wells are anticipated to be drilled between now and 2028.
- **The Barzan Gas Project:** RasGas, with its partners Qatar Petroleum and ExxonMobil, is approaching completion of the $10.3 billion Barzan Gas project. In 2013, RasGas announced the project's four offshore platform topside modules were successfully delivered and safely installed. The project is more than 80 per cent complete, and is expected to supply approximately 1.4 billion standard cubic feet of sales gas per day once the two trains are operational.
- **Al Sejeel Petrochemical Complex:** QP and QAPCO signed an agreement for the Front-End Engineering and Design (FEED) for a new petrochemical mega-complex to be built in Ras Laffan. Scheduled for completion in 2018, the project will host one of the world's largest mixed-feed steam crackers, producing 2.2 million MTPA of polymers. The project will use a number of locally produced feedstocks, including ethane, butane, and naphtha and will produce ethylene, high density polyethylene (HDPE), linear low density polyethylene (LLDPE), polypropylene, butadiene, and py-gasoline.
- **Al-Karaana Petrochemicals Complex:** This new QP-Shell development is set to create a new plant to produce olefins and derivatives in Ras Laffan. The facility will comprise a steam cracker, a mono-ethylene glycol (MEG) plant, a linear alpha olefin unit, and OXO alcohols unit. The MEG plant is forecast to be the largest of its kind in the world. The different facilities will add to the manufacturing of plastics, automotive, construction, cosmetics and pharmaceutical industries.

[21] *The Middle East Magazine, "Qatar plays a strategic LNG game", http://www.themiddleeastmagazine.com/news-detail.php?nid=134, accessed May 9, 2014.*
[22] *The Middle East Magazine, "Qatar plays a strategic LNG game", http://www.themiddleeastmagazine.com/news-detail.php?nid=134, accessed May 9, 2014.*
[23] *The Middle East Magazine, "Qatar plays a strategic LNG game", http://www.themiddleeastmagazine.com/news-detail.php?nid=134, accessed May 9, 2014.*

- **Helium II:** RasGas recently inaugurated the world's largest helium refining facility at Ras Laffan industrial city. The site will be operated by Qatargas and is set to generate 1.3 billion cubic feet of helium per year from feedstock provided from Qatari sources. Together with the output from the existing Helium I facility, this will make Qatar one of the largest producers of helium in the world, meeting around 25% of global demand.[24]
- **Laffan Refinery 2:** Qatargas signed an agreement with QP in 2013 to build a second refinery, which will be known as Laffan Refinery 2. The project, involving investment estimated at USD 1.5 billion, will double Qatargas' production capacity by 2016.
- **DHT:** Qatargas's Diesel Hydrotreater project is a facility slated to produce diesel to Euro 5 specifications. Projected to be complete in 2014, the project will operate in Ras Laffan and run at 50% of its operational capacity until the completion of a second refinery.

[24] *http://www.chemicals-technology.com/projects/qatar-helium-ii/*

ECONOMIC DIVERSIFICATION

The 36 companies of the energy and industry sector are responsible for the majority of Qatar's nominal GDP and are the mainstay of the national economy. Of all the subsectors, oil and gas has historically sustained the economy and current account surplus, providing approximately 80% of Qatar's total revenue.[25] Collectively, these industries play a central role in driving economic development - described in the Qatar National Vision as "the engine that drives progress by providing better opportunities and a better way of life for the country's citizens."

To continue to contribute to Qatar's economic prosperity, the energy and industry sector needs to generate returns and remain competitive in increasingly challenging markets - in the short and long term. Given the growing maturity of the sector, the government recognises the need for economic diversification in which the economy will be sustained by greater economic activity from other industries.

Economic Diversification

With vast reserves of hydrocarbons not yet recovered, the oil and gas industry will continue to play a vital role in generating wealth. However, continuing reliance on hydrocarbon revenues exposes the nation to risks of over dependence and volatile energy prices. Combined with declining levels of output from maturing resources, this makes economic diversification an essential element of future economic planning. Although the pursuit of various projects outside the energy sector is integral to this diversification strategy, the sector must also play a role in balancing its activities to reduce the overall share of the hydrocarbon economy. The planned growth of midstream and downstream projects – as well as transport activities, support services, and mining – is therefore critical in forging a path towards sound economic development.

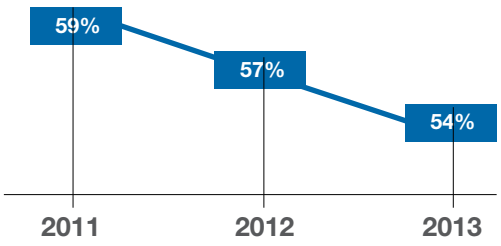
In line with the diversification strategy in the QNV 2030, the economy is showing clear signs of shifting towards a more balanced mix of commercial activity. Spending in the non-hydrocarbon sector increased

> "Our mission—balanced and sustainable growth—requires responsible use of resources and continuous modernization and development of public institutions to ensure good programme management and high-quality public services."
>
> **Tamim Bin Hamad Al-Thani**

in 2013, with significant investment in infrastructure, real estate and transport. These sectors are projected to continue their growth. In total, non-hydrocarbon activity grew at 11.4% in real terms,[26] outpacing the overall economy by four percentage points. With stabilized production levels in the oil and gas industry, the overall GDP share of the non-hydrocarbon sector is forecast to grow from 49.9% in 2014 to 57.2% in 2016.[27]

In future, upstream activities are set to take a less dominant position within the economy. The government moratorium on further gas production has combined with stabilizing output levels as newly built facilities ran at full capacity. As a result, the hydrocarbon sector grew at a much lower rate than historic highs in the past decade.[28] Stronger diversification is anticipated by QNB as investment spending continues to inflate the growth rate, by 1 percentage point in the next two years.[29]

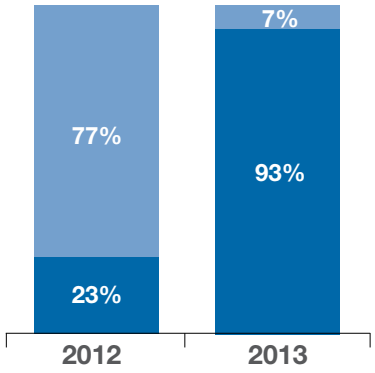
The Hydrocarbon Sector's Share of Nominal GDP



Source: QNB April 2014 Report

[25] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 5.*
[26] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 3.*
[27] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 7.*
[28] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 3.*
[29] *Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 7.*

Real GDP Growth (Share of Total)



Source: QNB April 2014 Report

Ongoing Major Projects

Project	Bn USD	End	Details
Lusail	45.0	2019	Mixed-use development
Qatar Rail	40.0	2026	Metro and rail links
Expressways	20.0	2018	Ashghal expressways
New Airport	15.5	2017	Hamad International Airport
Local roads	14.6	2018	Ashghal roads and drainage
Bul Hanine	13.0	2022	Oilfield redevelopment
Barzan	10.3	2023	Domestic gas production
Barwa Al Khor	10.0	2025	Mixed-use development
Barwa City	8.3	2015	Mixed-use development
Education City	7.5	2014	Universities and colleges
New Port	7.4	2020	New port south of Doha
Al Sajeel	7.4	2018	Petrochemical complex
Pearl Qatar	6.5	2016	Residential development
Al Karama	6.4	2017	QP/Shell petrochemicals
Msheireb	5.5	2016	Mixed-use development
Oryx Island	5.5	2022	Tourist island
Sharq Crossing	5.0	2021	Crossing for Doha bay

Source: QNB April 2014 Report

Qatar's Gross Domestic Product (GDP)

GDP Breakdown	2011	2012	2013
Nominal GDP (billion USD)	171.5	189.9	202.5
Nominal GDP Growth (%)	37.0%	10.8%	6.6%
Hydrocarbon Sector (% of Nominal GDP)	59.3%	56.8%	54.4%
Real GDP Growth (%)	13.0%	6.2%	6.5%
Hydrocarbon Sector (% Growth)	15.7%	1.2%	0.9%
Non-Hydrocarbon Sector (% Growth)	10.8%	10.3%	11.4%

Source: QNB April 2014 Report

INDIRECT ECONOMIC IMPACT

Developing the Local Value Chain

By buying goods and services locally wherever possible, the sector reduces delivery times, creates relationships with new market players, and helps to build skills and experience in the local market. Developing the supply chain in this way builds wealth, and in particular helps in the growth of small and medium sized enterprises, which play a vital role in economic development and diversification.

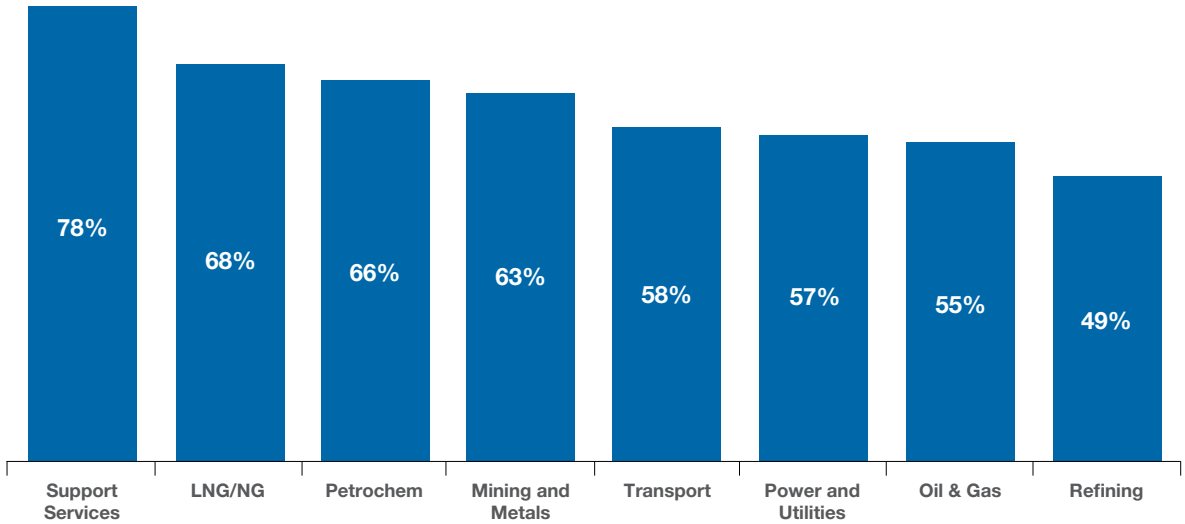
The sector's median rate of local spending stood at 60% in 2013, a rate similar to that in 2012. The industry's mid-spread, which captures the middle 50% of reporting companies, was between 47% and 78%. These figures show a modest increase from levels reported in past years. The LNG/NG and support services subsectors were responsible for the highest levels of spending on local goods and services. Other subsectors, which rely more heavily on feedstock and materials not available in Qatar, spend less on local goods and services.

A number of practices have been implemented that help to develop local supply chains. Most companies now have tender evaluation processes that favour bidders with a significant Qatari presence. The industry put in place a number of initiatives, such as workshops and open days to help train local vendors and inform them about available opportunities. Some companies have introduced electronic tendering tools to make procurement processes more open. Approaches like this give newer Qatari vendors the chance to become more competitive by learning how to deliver goods and services that meet the technical expectations of their clients. These preferential and supportive policies therefore help boost nascent domestic supply.

Local Procurement can:

- Give opportunity to smaller and local businesses.
- Provide a platform to nurture Qatari talent.
- Reduce delivery times.
- Establish long-term partnerships.
- Heighten the competitiveness of local vendors.
- Increase the pool of competent suppliers.

Average Local Spending (% of Total)**

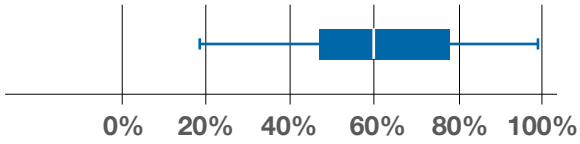


*27 Companies reporting out of 36 for whom the indicator is relevant
** Average computed on the basis of arithmetic means on individual companies

Local Procurement as a % of Total Spending				
	2010	2011	2012	2013
Median	54%	62%	60%	60%
Interquartile Range	34% - 79%	46% - 75%	43% - 77%	47% - 78%
Number of Reporting Companies	22	26	27	27

Goods and Services sourced locally

2013 (27 reporting)



Upstream Value Chain Development

- **Subsector co-operation:** A number of industry players have enhanced value retained in-country by forging new partnerships. Maersk Oil Qatar and Gulf Drilling International (GDI), for example, signed agreements in 2013 to develop new offshore accommodation and drilling rigs, worth approximately US$428.5 million. In addition to building local capacity and developing Qatari skills and competencies, the partnership has helped drive forward industry best-practice in health and safety through the shared implementation of an 'incident free' programme.
- **Policy development:** A number of companies have enhanced their procurement mechanisms by introducing new policies and establishing clear principles and criteria. Although already surpassing its 75% local spending target, QAFAC created a Sustainable Procurement Policy in 2013, drawing on its current approach and international best practices. The policy aims to further encourage local economic development while minimising negative environmental and social impacts.
- **Technological advances:** A number of companies have developed online systems to facilitate the process of awarding commercial contracts. Dolphin Energy, for example, recently launched its e-registration portal, making it easier for local vendors to register and compete for contracts. In combination with local publishing of contract opportunities, the system will help to satisfy demand for locally sources goods and services.
- **Inspections:** Preferential terms retain value in-country, but can also create business risks. Local vendors sometimes have less experience than major international bidders, and can fall short on important technical criteria where their experience is less developed. To address this gap, a number of companies in the sector carry out supplier audits to mitigate risks. Audits increasingly focus on non-financial matters as well. Companies such as QAPCO and RasGas made unannounced visits to contractor camps in 2013, to ensure compliance with housing, wage, amenity, and manpower policies, standards, and regulations.
- **External certification:** In order to better manage supplier business risks, QAFCO initiated a process to assess its procurement and supply operations against global standards, working towards internationally-recognised certification from the Chartered Institute of Purchasing and Supply (CIPS).

Downstream Value Chain Development

- **Building domestic capacity:** Stimulating downstream demand is an important component of value chain development. QAPCO and its partners established the Qatar Plastic Products Company (QPPC) in 2000 to support domestic production of products such as bags and plastic film, using the LDPE and LLDPE that they produce. Through this venture, QAPCO has helped build a nascent plastics industry in Qatar founded on low cost and reliable supply. Qatalum has similarly worked in 2013 to supply aluminium to its first two Qatar-based clients. The company has made the development of the local downstream aluminium industry a central commitment in its corporate strategy.

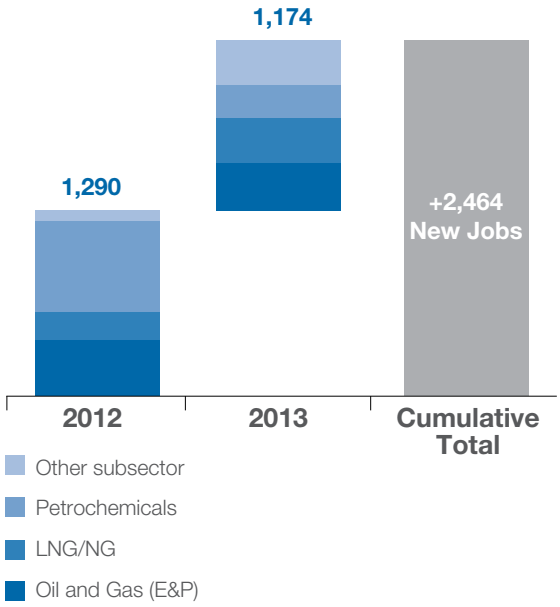
Job Creation

The addition of new jobs was an important component of the sector's economic contribution in 2013. As the sector continues active expansion into new projects it creates new employment opportunities. Based on comparable figures reported by companies, the wider sector's job growth rates in the past year remained similar to those in 2012. In all, 1,174 new jobs were added to the sector's comparable reporting companies.[30] Most of these came from GDI, Qatar Steel, RasGas, and Qatargas.

As a country that relies heavily on foreign labour, job growth in Qatar is often accompanied by an influx of expatriates. Currently, expatriates represent 87% of the population and 94% of the labour force[31]. Within the energy and industry sector, employment growth is often associated with short-term construction needs or requirements for access to technical expertise. These labour needs are typically sourced from abroad, and represent a critical stepping stone to economic expansion and wealth creation by bringing new knowledge, skills and trades to the country.

> "Qatar's bountiful hydrocarbon resources can be leveraged to make sustainable development a reality for all its people. Converting these natural assets into financial wealth provides a means to […] create a highly skilled and productive labour force"
>
> **Qatar National Vision**

Jobs Created



**Calculated for 35 comparable companies reporting on workforce from 2011 to 2013.*

Job Creation

Subsector	Comparable Companies	Jobs Created		
		2012	2013	% Change
Liquefied Natural Gas/Natural Gas	3	200	303	+51.5%
Mining, Minerals and Other	3	13	256	+1,869.2%
Oil and Gas (Exploration and Production)	7	390	321	-17.7%
Petrochemicals and Chemicals	8	647	232	-64.1%
Power and Utilities	6	74	-27	-136.5%
Refining	2	51	43	-15.7%
Support Services	3	-163	-84	-48.5%
Transport, Storage and Distribution	3	78	130	+66.7%
Full Sector	**35**	**1,290**	**1,174**	**-9.0%**

[30]Figures represent net totals, including increases and/or decreases for all companies reporting on workforce size between any two given years.
[31]Qatar National Bank, "Qatar Economic Insight: April 2014", 2014, 4.

SOCIETY

Community Engagement and Investment
Human Rights | Business Integrity

2013 Achievements

19%
increase in community development spending

143 million USD
invested in community development in 2013

6
companies reported a stand-alone community investment strategy

NATIONAL SOCIAL DEVELOPMENT

"Social development under the Qatar National Vision encompasses a system dedicated to social welfare and protection for all citizens and to bolstering women's role in society and empowering them to be active community members. Social advancement also means equal educational, employment and career opportunities for all citizens, regardless of their background or gender and a tolerant and fair society that embraces Islam's values of peace, welfare, justice and community."

QNV 2030

The Qatar National Development Strategy (NDS) 2011-16 offers an integrated approach to social development. It includes a diverse set of targets and recommended actions. Some elements of the strategy seek to ensure the provision of basic social amenities and services such as education, healthcare, law enforcement and assistance to the needy. Other elements seek to build a social structure that cultivates certain social values and behaviours, such as justice, equality, social tolerance, benevolence, constructive dialogue and openness towards other cultures.

The NDS makes a firm commitment to establishing a social protection system that preserves the civil rights of all citizens, values their contribution to society and ensures an adequate income for them to maintain a healthy and dignified life. The strategy outlines three overarching outcomes necessary to meet this commitment: improving and strengthening the social protection system, making the workforce and society more inclusive, and extending social responsibility to the business community.

Social development is driven by shared responsibilities for common goals. It requires the broad participation of all citizens and the government, working together to fulfil the basic rights of individuals and the needs of the state. It is also inextricably intertwined with economic, human and environmental development - all four pillars are mutually dependent and reinforcing.

Much of the sector impact described in other chapters in this report forms part of the energy and industry sector's contribution to social development, such as companies' efforts to strengthen their approach to occupational health and safety and to increase female employment.

Beyond activities like this, which fall within the direct scope of its own operations, the sector seeks to contribute to Qatar's social development in other ways: first, by working to uphold human rights within its supply chain and second, by directly engaging with and investing in communities. Business integrity is critical to ensuring the full value generated by the sector is equitably shared with society, and comprises a third prong of the sector's social development approach.

COMMUNITY ENGAGEMENT AND INVESTMENT

The energy and industry sector plays a central role in Qatar's development by generating revenue, producing energy and materials, and providing jobs. The funds, resources, and professional time and expertise it possesses are directed towards national social development via several different channels.

One conduit for the sector's contribution to society is the partnership between Qatar Petroleum and the Qatar Foundation for Education, Science, and Community Development, a non-profit organisation that contributes to Qatar's social development through education and research. This partnership has enabled the realisation of extensive projects in education, research, health, technology, and culture. Through it, Qatar Petroleum, with shares in the bulk of the companies that make up the sector, directs a substantial proportion of sector revenues to social development projects.

Sector revenues have helped to fund some of Qatar's most complex infrastructure and building projects, including the Education City and the Qatar Economic Zone (QEZ). Education City spans 17 square kilometres and includes nine universities - six American, one British, one French, and one Qatari. It also includes several state-of-the-art research centres, residential areas, hospitality, health and sports facilities, the FIFA 2022 stadium, a waste management system, a commercial zone, car parks, heritage sites and parks. The QEZ, covering more than 40 square kilometres, will be designed to house a range of industries to bolster Qatar's economic growth and diversification, including high technology, aviation support, assembly operations, logistics, air parcel services, food processing, tools and machinery, downstream metals, downstream petrochemicals, building materials, maritime, transportation and automotive industries. The QEZ will also contain commercial offices and support facilities.

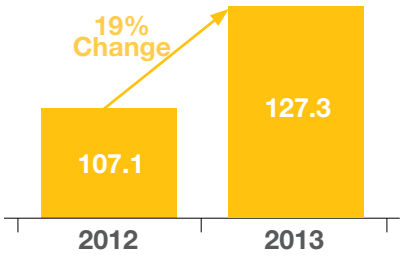
Company Community Engagement and Investment

In addition to collectively directing their funds to Qatar Petroleum and the Qatar Foundation, companies within the sector engage and invest in communities through their own programmes. Increasingly, companies are seeking to implement their own initiatives and increase staff involvement and volunteering in their social responsibility efforts, in addition to sponsoring other organisations and their initiatives. Several companies are developing their approach to evaluating potential programmes and organisations for investment in order to maximize the impact of their social investment expenditure.

In 2013, twenty-nine companies reported combined social investment spend of almost USD 143 million. Data from the 28 companies that provided information for 2012 and 2013 showed a 19% increase in total contributions, investing approximately USD 20 million more in 2013. The mining and refining subsectors achieved the largest percentage growth in reported contributions, with the oil and gas and support services subsectors currently registering over 50% of the total amount invested in 2013. All subsectors reported an increase in community spending.

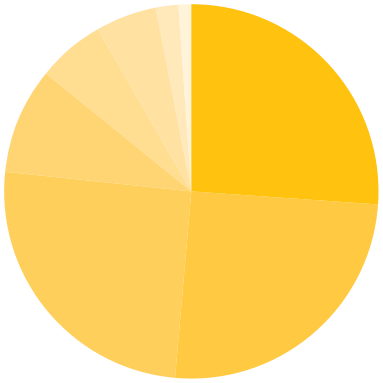
Total social investment budget

(In Millions)



**For 28 comparable companies reporting continuously from 2012 to 2013*

Social Investment Budget by Subsector (%)



- Oil and Gas (Exploration and Production) **26.3%**
- Support **25.3%**
- Refining **24.8%**
- Transport **9.3%**
- Petrochemicals and Chemicals **6.3%**
- Liquefied Natural Gas/Natural Gas **5.1%**
- Power **2.1%**
- Mining, Minerals and Others **0.8%**

**30 companies reporting out of 36 for whom the indicator is relavant in 2013*

To date, community investment initiatives sponsored by the companies within the sector have been focused on support for health and safety, education and training, sports, environment, science and technology, and arts and culture. These include voluntary contributions and donations to charities, NGOs, research institutes and specific social programmes.

Six companies in the sector (Dolphin Energy, Maersk, ORYX GTL, QAFAC, Qatargas, and Qatar Steel) have individually committed to developing a stand-alone community investment strategy to clearly measure and enhance their impact on society, the environment and the economy. Three companies (QAFAC, QAPCO, and Q-Chem) have set a specific target to increase their community investment spending. One company (WOQOD) plans to develop an employee compensation mechanism to reward employees' volunteering for community service and increase company-wide engagement with the community beyond sponsorship activities.

Case Study: The Ras Laffan Community Outreach Programme (RLIC-COP)

Ras Laffan Industrial City (RLIC) is the location of onshore facilities for processing, storing and exporting products associated with North Field gas and condensate. The RLIC-Community Outreach Programme (RLIC-COP) is an initiative of the seven energy companies operating in Ras Laffan Industrial City (Qatar Petroleum, Qatargas, RasGas, Qatar Shell, Dolphin Energy, ORYX GTL, and ExxonMobil), seeking to create a respectful, trust-based partnership between industry and the community.

The RLIC-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. RLIC-COP administers surveys to collect community feedback on ways to make Ras Laffan City (RLIC) and its neighbourhood a better place to live, and conducts quarterly meetings between members of RLIC and community representatives.

In line with the Qatar National Vision 2030 and the National Development Strategy 2011-16, the RLIC-COP has identified three strategic areas where its contribution can have maximum impact:

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

To improve community health and to protect the environment, RLIC-COP has set up air quality monitoring stations at different locations in the city and surrounding communities. RLIC-COP has also initiated activities such as competitions for schools, fund raising charity events, and environment conservation programmes. A new COP centre has been created to offer computer, language and recreational facilities and activities for the benefit of the community.

Case Study:
The Northern Community Skills Development Project

RasGas (on behalf of the Ras Laffan Community Outreach Programme) established the Northern Community Skill Development Programme in Al Khor. The project caters to the training and development needs of the communities of the northern region by providing free courses for adult nationals.

RasGas conducted a community skills development needs assessment in 2011 and 2012. From this assessment and subsequent analysis, it was established that four core areas of development were required within the community, with additional areas to be identified for later expansion. Initially, the project has focused on developing proficiency in the English language among community members.

A three-month pilot started in November 2012, offering beginner's English classes for male and female groups. In February 2013, 93 students graduated from the first phase of courses. The second phase will offer classes at beginner to intermediate levels, as well as internationally recognised foreign language test-preparation classes. The final phase will see full implementation of the Skills Development Programme, with a broad range of courses.

Case Study:
Qatar Petroleum (QP) Environment Fair 2013

Now in its seventh year, the QP Environment Fair showcased the environmental programmes and initiatives of more than 35 companies and organisations in Qatar, enabling companies to engage with the public on the environmental concerns of Qatar and the sector's response. The three-day event, this year with the theme "Clean Energy for a Sustainable World," was free to the general public. In addition to the exhibition, the QP Environment Fair 2013 featured entertaining and educational activities for students and families.

HUMAN RIGHTS

According to the United Nations Secretary General's Special Representative on business and human rights, "corporate responsibility to respect human rights means acting with due diligence to avoid infringing on the rights of others, and addressing harms that do occur."[32]

The Universal Declaration of Human Rights, the International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights, and the core conventions of the International Labour Organization together provide an authoritative list of internationally recognised rights. The principles those instruments embody are the most universally agreed upon by the international community, and they comprise the human rights benchmarks by which other social actors evaluate companies.

Although businesses can affect many aspects of human rights in some manner, a key area of impact is labour rights – including, but not limited to, the right to non-discrimination, the abolition of forced labour and child labour, the right to equal pay for equal work, the right to equality at work, the right to just and favourable remuneration, the right to a safe work environment, and the right to rest and leisure.

The right to an adequate standard of living, including food, clothing and housing and access to medical services is also a responsibility increasingly shared by government and business, particularly in Qatar with its large population of migrant workers.

The HSE Legal Framework in the Oil and Gas sector in Qatar includes various regulations which define the national requirements for working hours, working age, paid annual leave, health and safety measures, and accommodation, food and medical care for workers. Companies are expected to comply with these national laws and regulations in their own operations and are stepping up efforts to ensure their suppliers and contractors do the same. More information on this topic is provided in the Workforce chapter of this report.

Human Rights and Labour Practices within the Supply Chain

An aspect of the sector's social development approach is its work to ensure that good social practices are implemented in its supply chain. Many companies are increasing their efforts in this area to ensure their supply chains adhere to national laws and regulations, in recognition of the fact that sharing responsibility for good social practice among suppliers and contractors not only reduces risk but also opens opportunities for improved efficiency, innovation and collaboration.

The UN framework on business and human rights describes the core policies and processes business enterprises should have in place to address human rights:

- A policy commitment to meet their responsibility to respect human rights.
- A human rights due-diligence process to identify, prevent, mitigate and account for how they address their impacts on human rights.
- Processes to enable the remediation of any adverse human rights impacts they cause or to which they contribute.

In order to "know and show" that they are meeting their responsibility to respect human rights, companies in the sector are working to develop appropriate policies and processes. A focus is to enhance their human rights due diligence processes to meet the criteria defined by the UN framework on business and human rights.

Case Study: QAFAC's Human Rights and Procurement Policies

In 2013, QAFAC reviewed its human rights position and developed a Human Rights Policy that addresses the most material issues arising from its operations. Created for employees, the policy will also be the basis for contractor and supplier human rights standards. QAFAC ensures that every employee receives training on its human rights policies and practices.

QAFAC has also developed a new Sustainable Procurement Policy. As part of its creation, QAFAC measured its procurement practices and

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[32] John Ruggie, "UN Guiding Principles on Business and Human Rights", 2011, http://www.business-humanrights.org/media/documents/ruggie/ruggie-guiding-principles-21-mar-2011.pdf, 13/4/2014

policies againstleading international practice and regional oil, gas and petrochemical sustainable procurement processes and strategies. Its policy aims to follow these guidelines and standards to ensure that QAFAC is managing the social, environmental and economic impacts of its entire supply chain. According to the policy, QAFAC prioritises contractors and suppliers who have high social, environmental and economic standards and practices. QAFAC will begin full implementation of the policy in 2014.

QAFAC is committed to communicating the policy internally and externally and is training its employees to enhance its procurement policies and procedures as part of policy implementation and compliance.

Case Study:
Oxy's Human Rights Policy and Training

Oxy's Human Rights Policy delineates the company's commitment to promote, throughout its operations, those rights and freedoms universally recognized in international and national law and that are set forth in guiding principles such as the Voluntary Principles on Security and Human Rights (VPs).

Oxy Qatar actively promotes respect for human rights among its employees, contractors and host communities through training and awareness raising. They provide human rights training to new employees and periodic refresher training to security personnel. Oxy Qatar's human rights training module is provided in person or online, and is available in both Arabic and English.

Background checks for private security personnel are conducted prior to their employment at Oxy Qatar, and private security contracts include provisions requiring adherence to the Human Rights Policy and the VPs. In addition, Oxy Qatar requires private security firms that meet their contract prerequisites and pass their background screening to receive human rights training within two months of beginning their assignments, as well as refresher training on an annual basis.

As of year-end 2013, 100 per cent of Oxy Qatar's employees, contractors and private security personnel had received their required human rights training. More than 100 employees, contractors and private security guards in Qatar attended human rights training in 2013.

Case Study:
Improving Worker Welfare with Subcontractors (Maersk)

A Maersk Oil standard on Health, Safety, Security, Environment and Quality contractor management was rolled out in 2013, under which Maersk Oil Qatar (MOQ) assessed its existing contracts for operational risks. The findings enabled the company to set priorities, and MOQ is working to put contractor management plans in place.

An MOQ local working group on contractor management reviewed construction-contract provisions on issues such as shifts and rotation lengths for offshore maintenance workers.

Also in 2013, MOQ audited its construction and helicopter services contracts, among others, and reviewed the quality of workforce accommodation. Audits involved staff from Maersk Oil's HSE department, or subject matter experts, as well as representatives from the contract-holder with day-to-day operational knowledge. Findings, which are logged in Maersk's safety management system, enable the company to track actions and ensure that non-conformances and opportunities for improvement are addressed.

Maersk is also working towards an MOQ standard working conditions policy, for use by its suppliers and contractors, which reflects Maersk and UN Global Compact requirements and is in compliance with local regulations.

Case Study:
CSR Screening and Audits of Contractors and Suppliers (Qatalum)

In 2013, Qatalum began conducting Corporate Social Responsibility (CSR) screening and regular audits of its contractors and suppliers. Contractors and sub-contractors must comply with the rules stated in the Universal Declaration of Human Rights. The minimum requirements Qatalum has for its contractors include:

- Acceptable housing standards.
- Minimum monthly salary.
- Timely monthly salary payments to employees.
- Other benefits including paid leave and free access to or an allowance for food and transportation.

Qatalum audits its contractors at least once a year, and more frequently if necessary. Audits check all the above requirements and whether:

- Overtime payment is duly compensated.
- Employees are able to have a second employer.
- Injury/accident insurance and medical coverage are provided.
- All living facilities meet basic sanitary standards.
- Fire safety measures are in place.

Case Study:
RasGas Responsible Contractor Management

A central part of RasGas' effort to manage its projects in a responsible manner involves managing contractors. In its Barzan gas project, this involves managing the prime engineering, procurement and construction (EPC) contractor and the various subcontractors involved in construction.

Requirements are defined in the EPC contracts, and RasGas has the right to audit contractor performance at any time. Contracts include detailed specifications to protect the safety, health, environment and security of every individual. They provide instructions on how RasGas expects work to be undertaken and define elements such as the nature and size of camp accommodation, site landscaping, required living space, laundry provision, the quality and quantity of recreational and sporting facilities, housekeeping and janitorial services, food standards and handling, pest control, and the provision of medical facilities. Complaint mechanisms for workers are also in place.

To put these provisions into action, RasGas has developed, with its prime contractor, a wide range of camp-related procedures for safety, health, the environment and security. These include a camp health and welfare programme, an occupational hygiene programme which includes measures on hazard monitoring and control, a heat stress prevention programme and other initiatives in areas including camp operations and maintenance, security, risk assessment, and emergency preparedness and response.

RasGas also carries out regular audits and inspections to ensure compliance with the provisions in its contracts. Audits can lead to findings that require corrective action, or recommendations for further improvement.

BUSINESS INTEGRITY

Companies in the energy and industry sector also have policies and procedures to prevent incidents of corruption, bribery and fraud - thereby minimising risks to their own business and to society at large.

According to the international NGO Transparency International (TI), "Corruption is the abuse of entrusted power for private gain. It hurts everyone who depends on the integrity of people in a position of authority."[33]

Private companies in the energy and industry sector in Qatar have significant influence in many public spheres. Consequently, corruption in the sector could significantly harm the public interest. By promoting greater transparency among companies in the sector, the SDIR programme is helping to create an environment of transparency that enables businesses to be clear about their policies and practices, and to be held accountable for their actions.

Many companies in the sector are implementing specific anti-corruption measures. In 2013, 19 companies reported that they had a Code of Ethics or a Code of Conduct in place. Four companies have reported having a whistle-blower system that enables employees to report possible breaches of their codes without fear of reprisal. Dolphin Energy plans to implement online training and certification for its Code of Business Conduct in early 2014, and has established a Corporate Investigation Policy to guide investigations of alleged incidents of corruption or fraud. Dolphin Energy, Oxy and ORYX GTL have helplines in place to allow employees to disclose any misconduct. In 2013, for the first time, companies in the sector publicly reported incidents of non-compliance with policies and procedures related to corruption and fraud. The incidents were investigated, and appropriate disciplinary actions were taken based on the results of the investigations.

Case Study:
Maersk's Anti-Corruption Measures

Maersk has a clear framework in place for reporting breaches or suspected breaches of its Group policies and other business standards. Employees are able to raise suspected breaches with line managers, other management, local human resources or legal teams, or to use the whistle-blower system, which can be used anonymously.

The whistle-blower system enables employees to report possible breaches that may harm the company, allowing the Group to learn about wrongdoing quickly and take appropriate action. Employees can report fraud, corruption, insider trading, discrimination, harassment, severe breaches of IT security and other serious matters. The system provides a reporting tool for those who might otherwise not make a report, for example out of fear of putting their job at risk. Maersk Oil does not tolerate retaliation against anyone for reporting violations they genuinely believe have occurred, and investigates each report based on the seriousness of the allegations and the facts available.

Maersk Oil also has legal compliance due-diligence tools and guidelines to carry out assessments for the selection of certain categories of business partners, such as agents, joint venture partners and large-scale suppliers globally and in high-risk areas. This includes risk-assessment rules and third-party legal compliance requirements. In 2013, as in previous years, awareness-raising has been carried out with long-term contractors to ensure they understand the company's core values.

In 2013, Maersk continued to provide training for staff with potentially high exposure to corruption and bribery, including (but not limited to) management, legal staff, human resources managers and employees working to secure licenses, permits or contracts with government offices or major suppliers. Anti-bribery and anti-corruption training is mandatory for all new joiners. E-learning courses on fraud prevention are mandatory for management, legal and finance staff.

[33] *Ibid.*

WORKFORCE

Workforce Overview | Qatarization | Employee Development
Welfare and Engagement | Diversity and Inclusion

2013 Achievements

306
more Qataris employed by the sector in 2013

1,049,638
hours of employee training delivered in 2013

An average of **4** additional hours of training delivered per employee

A NATIONAL WORKFORCE

Qatar's rapidly expanding economy is a key factor influencing the composition of the country's workforce. Given Qatar's relatively small native population, industrial growth means that expatriates make up a significant portion of the working population. Despite this, Qatar is committed to the development of local human resources to better meet the demands of the economy while continuing to welcome expatriates. The result is a multi-cultural national workplace.

Qatar encourages programmes and initiatives designed to meet its future workforce needs. The Qatar National Vision (QNV) 2030 emphasises advancing the country's health and educational efforts to strengthen national human resources. The QNV calls for the development of education programmes and training opportunities that meet the needs of the Qatari labour market.

The Qatar National Development Strategy (NDS) 2011-16 also aims to bolster Qatarization efforts by focusing development efforts on youth and women in the private sector, two elements of the labour market where there is substantial opportunity for growth. The NDS emphasises better working conditions and excellent compensation packages to help recruit and retain skilled expatriates. The NDS also targets a female participation rate of 42 per cent by 2016.

Sector Context and Approach

Qatar's energy and industry sector currently supports the direct full time employment of more than 39,000 people and tens of thousands more in the supply chain. The workforce is diverse, made up of more than 70 nationalities, including experts with a range of skills.

The sector's continued expansion, innovation and leadership in delivering energy and other value added products requires a growing supply of highly skilled and knowledgeable people. As a sector, it must compete at a global level to attract and retain the best talent, while building capacity and knowledge through education and ground-breaking research within Qatar.

Strategic Approach

Companies across the sector have strengthened their commitment to developing the workforce and have this year reported on their five-year sustainability plans. Many of the plans include initiatives and targets for workforce development. The strategies reflect the focus on Qatarization and employee development, in alignment with the objectives of the QNV and NDS.

Qatarization

The sector's Strategic Qatarization Plan establishes a goal of 50% Qatarization for the sector and focuses on building a capable Qatari workforce.[34] The efforts companies undertook in 2013 to move towards this goal included development programmes, outreach to Qataris studying nationally and internationally, internships, recruitment fairs, and educational partnerships. In 2013, Qataris made up 25% of the sector's workforce.

Employee Development

The industry invests significant amounts in developing its workforce, making sure employees are highly skilled and have the technical competencies required. Companies offer a range of internal and external technical and managerial training and development programmes, workshops, online courses and e-learning, secondments and opportunities for further education.

Welfare and Engagement

Employee wellness and satisfaction are important to maintain to preserve the quality and commitment of the workforce. The companies within the sector take care to create work environments that are appealing to employees and meet their needs for services for their families, continued learning opportunities, and recreational activities.

Diversity and Inclusion

Diversity contributes to a vibrant workforce by providing contrasting views, cultures and varied approaches to problem solving in the workplace. In turn, this benefits innovation and knowledge sharing. The sector seeks both to increase the number of local employees in the workforce, while maintaining a large skilled expatriate labour force. Efforts are also made to increase opportunities for women.

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[34] *Strategic Qatarization Plan, http://www.qatarization.com.qa/qatarization/qat_web.nsf/web/plan (Jun. 1, 2000).*

WORKFORCE OVERVIEW

The energy and industry sector workforce continues to grow in line with its ongoing expansion in production.

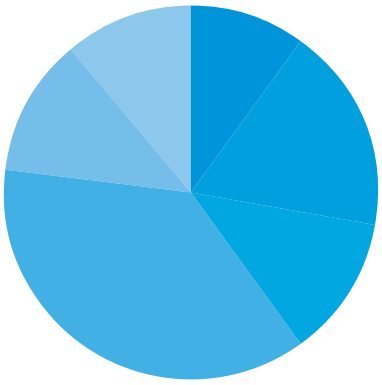
Workforce size for 2012 and 2013 was reported by 35 companies, 97% of the sector. In total, the sector employed 39,002 full time employees in 2013, representing a 3.1% increase in the total workforce size, or 1,174 more employees than in 2012. The oil and gas subsector remains the largest employer within the sector, and continued to add the most employees (321). In all but two subsectors, there was growth in workforce size, with transport, storage and distribution showing the largest percentage growth (8.7%). The support services subsector experienced the biggest decrease in workforce size as a result of scaled back operations by one company.

Qatar has the lowest unemployment rate overall and for youth unemployment.

- ISPI (Institute for International Political Studies) 2013 report on GCC countries

Total Workforce

(2013)



**For 35 companies reporting on workforce*

- Other Subsectors **10%**
- Liquefied Natural Gas/Natural Gas **18%**
- Mining, Minerals and Others **12%**
- Oil and Gas (Exploration and Production **37%**
- Petrochemicals and Chemicals **12%**
- Power & Utilities **11%**

Workforce

Subsector	Comparable Companies	Number of Employees			
		2012	2013	Change in # of Employees	% Change
Liquefied Natural Gas/Natural Gas	3	6,807	7,110	+303	+4.5%
Mining, Minerals and Other	3	4,312	4,568	+256	+5.9%
Oil and Gas (Exploration and Production)	7	13,972	14,293	+321	+2.3%
Petrochemicals and Chemicals	8	4,430	4,662	+232	+5.2%
Power and Utilities	6	4,506	4,479	-27	-0.6%
Refining	2	2,094	2,137	+43	+2.1%
Transport, Storage and Distribution	3	1,492	1,622	+130	+8.7%
Support Services	3	215	131	-84	-39.1%
Full Sector	**35**	**37,828**	**39,002**	**+1,174**	**+3.1%**

QATARIZATION

Qatarization refers to all efforts designed to develop the local talent pool and to advance the skills of, and retain employed Qataris. Promoting a skilled and capable local workforce is important to meeting Qatar's economic goals.

The QNV 2030 and NDS highlight the following priority areas for Qatarization:

- Developing Qataris' professional and technical skills.
- Making the industry a desirable field to work in.
- Increasing the percentage of Qatari women in the workforce.

Qatarization is one of the Ministry of Labour's (MoL) top priorities. Given that most Qataris currently hold entry-level positions, the Ministry requires that companies make training and education opportunities available to help individuals grow and assume more senior roles.

Efforts to increase Qatarization in the sector benefit the country as a whole by increasing educational and training opportunities, advancing local human resources, and creating attractive job opportunities. In 2013, a common feature within corporate Qatarization programmes was internships and apprenticeships for students and recent graduates. Companies also invested in training and graduate education to enable Qatari employees to take up more senior positions.

Sector Qatarization

Qatarization efforts are not without their challenges. According to QNB 2013, in 2012, nearly 83.8% of Qatari nationals held jobs in the public sector, indicating a marked preference for job opportunities in the public sector as opposed to the private sector[35].

Demonstrating their commitment to increasing Qatarization, companies have incorporated Qatarization goals within their five-year strategies. In 2013, 10 companies included specific targets related to their efforts to increase their Qatari workforce. One company has already reported exceeding its 2013 goal for Qatarization by 7%.

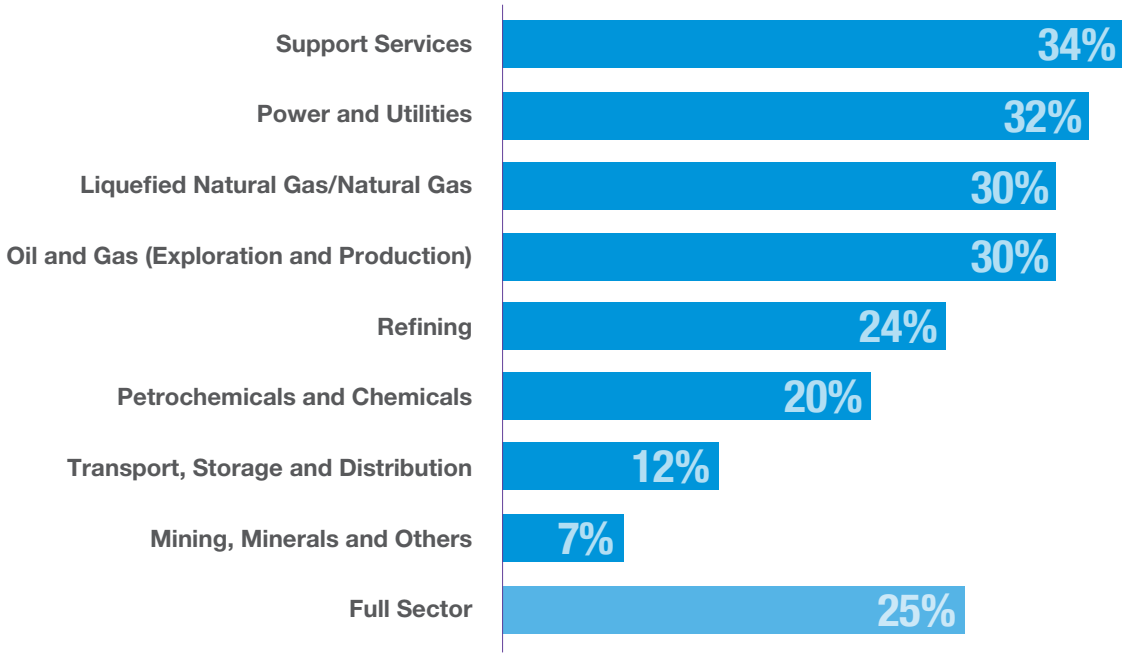
In 2013, 34 companies reported on their Qatarization rate, which refers to the number of full time Qataris holding positions as a percentage of the total workforce. In total, the companies employed 9,885 Qataris in 2013, equal to a Qatarization rate of 25.3% for the sector. Compared to 2012, there was an increase in the number of full time Qataris employed by 306. However, the Qatarization rate remained largely the same due to the growth of the total workforce recorded in 2013. Looking at individual companies, Qatarization rates ranged from 6.8% to 33.7%.

[35] *Qatar National Bank (QNB), "Qatar Economic Insight," 2013, http://www.qnb.com.qa/cs/Satellite/QNBQatar/en_QA/InvestorReln/Publications/enEconomicInsightReports, accessed May, 18, 2014.*

Qatarization							
Subsector	Comparable Companies	Qatarization Rate		Number of Qataris		Year-Over-Year Change	
		2012	2013	2012	2013	#Qataris	%Change
Support Services	2	33.1%	33.7%	45	44	-1	-1.8%
Power and Utilities	6	31.8%	31.9%	1,434	1,431	-3	-0.2%
Liquefied Natural Gas/Natural Gas	3	29.9%	30.3%	2,032	2,153	+121	+6.0%
Oil and Gas (Exploration and Production)	7	30.5%	30.0%	4,266	4,292	+26	+0.6%
Refining	2	23.5%	24.4%	492	522	+30	+6.0%
Petrochemicals and Chemicals	8	18.9%	20.1%	837	937	+100	+11.9%
Transport, Storage and Distribution	3	10.6%	12.0%	157	195	+38	+23.8%
Mining, Minerals and Other	3	7.3%	6.8%	316	311	-5	-1.5%
Full Sector	**34**	**25.4%**	**25.3%**	**9,579**	**9,885**	**+306**	**+3.2%**

When assessing the Qatarization rate of the subsectors in 2013, the support services, power utilities, liquefied natural gas/natural gas, and oil and gas (exploration and production) were all at or above 30%, progressing towards the 50% target. Refining, petrochemicals and chemicals industries were between 20 and 29%, showing increases in both the number and percentage of Qataris employed. The mining, minerals, and other industry remained the subsector with the lowest Qatarization rate, achieving 6.8%, a decrease from the 2012 rate of 7.3%. Qatarization here remains a particular challenge given the nature and location of the business, yet companies within the subsector are continuing to invest in improvements to their recruitment strategies.

Subsector Qatarization Rates



Weighted averages for 34 comparable companies reporting in 2013

Awarding Success

In 2013, His Excellency Dr. Mohammed Bin Saleh Al-Sada presented companies in the Energy and Industry sector with awards and certificates celebrating their excellence in Qatarization. The winners of the Qatarization Crystal Award were:

- *Qatargas*
- *Qatar Shell*
- *Dolphin Energy*
- *Qatar Petrochemical Company*
- *RasGas*

The following companies also received Qatarization Certificates:

- *Maersk Oil*
- *Qatar Aluminium*
- *Qatar International Petroleum Marketing Company*

Sector Qatarization Activities

Companies use various strategies to attract and retain qualified Qatari talent. An outline of how the sector works to attract, develop, and retain Qatari employees is provided below.

Career Fairs

All 36 companies in the sector participated in the Qatar Career Fair 2013, a five-day recruitment event for Qatari nationals. This is one of the most significant recruitment opportunities for local talent for most companies. Some companies have also attended other fairs in Qatar and in some cases overseas. Other fairs attended in 2013 included:

- Qatar Independent Technical School (QITS) Career Fair.
- Texas A&M University (Careers for Engineers 2013).
- Annual Career Fair for Qatar students in the UK.

Education and Youth

Companies within the sector recognize the value of investing in youth. Educational partnerships and programmes target young people and aim to build their interest and capacity in subjects relevant to the sector. In 2013, activities included partnerships with Qatar University, summer training and internship opportunities, establishing new sector-focused certificate programmes, and other targeted development programmes aimed at building relevant competencies. In one of these, graduates are supported in learning and developing the skills needed to gain internationally recognized certification.

Training and Education

Several companies in the sector provide training and educational opportunities for students and existing employees to build skills. Companies hire recent graduates and provide technical and professional skills training to build their capacities. In 2013, one new programme introduced at a company focused on supporting Qatari female engineers in their professional development while helping them to balance cultural expectations and other commitments.

EMPLOYEE DEVELOPMENT

Many of the jobs in the energy and industry sector are highly technical and require competencies that are in demand around the world. Challenging labour markets are one reason why the sector invests in skills development and training its existing employees. These initiatives are also well aligned with national development goals.

In 2013, several companies had well-established methods to assess the education and training needs of their employees. These systems allowed companies to best support their employees in their jobs by providing them with appropriate training and other resources for development.

Qatar Petroleum Corporate Training Department (QPCT) offers training and development support to all employees in the energy and industry sector in Qatar. Programmes offered by QPCT include:

- Vocational training and learning support, catering for Technical and Vocational Education and Training.
- Professional and development training.
- University placement and scholarships, responding to the higher education needs of the sector.
- Educational and other resources via the QP library and e-learning facilities.
- Language competency to enhance the skills of Qataris in English.

In addition, Qatar Petroleum is launching other training programmes using the capacity of education institutions like the Qatar Foundation, Qatar University and College of North Atlantic - Qatar.

Sector Performance

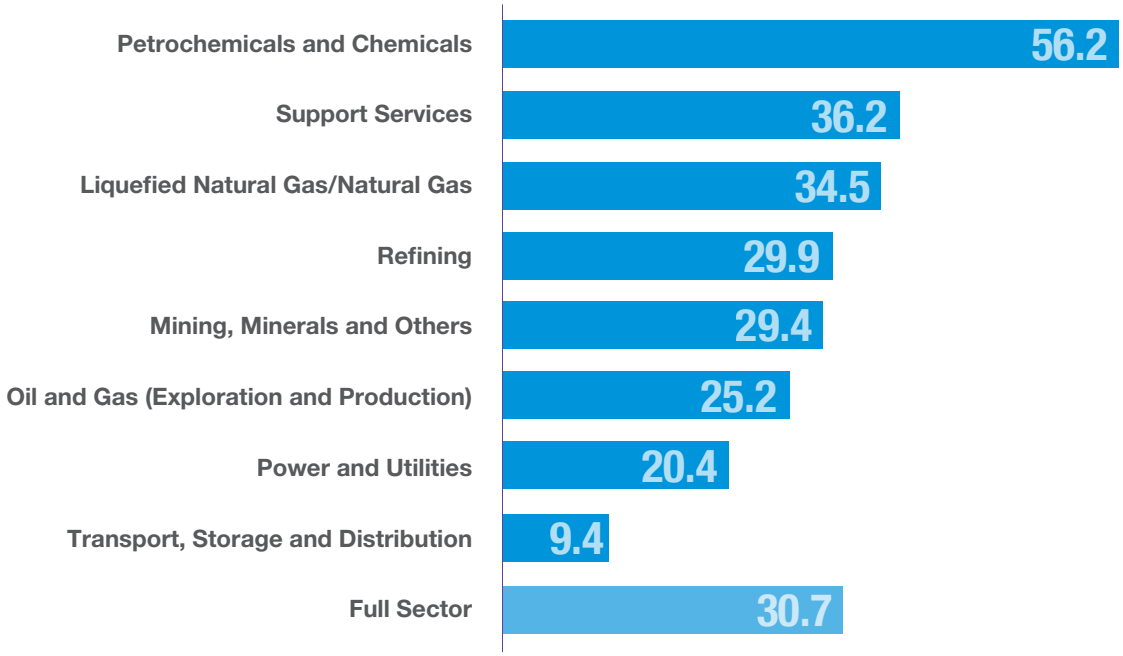
In 2013, 28 companies reported a total of 1,049,638 hours of training for full time employees, a simple average of 30.7 hours of training per full-time employee. Although training rates vary according to levels of employment, role, and need, an approximate average of 3.8 days of training were provided to each employee in 2013. The total number of training hours delivered by the 28 companies increased by 169,211 hours in 2013, representing almost 4.0 hours more per employee (or half a day more) compared to 2012.

Employee Training

Subsector	Comparable Companies	Total Hours		Average per Employee		Year-Over-Year Change	
		2012	2013	2012	2013	Total Hours	Per Employee
Petrochemicals and Chemicals	7	180,784	251,003	42.7	56.2	+70,219	+13.6
Support Services	3	6,703	4,746	31.2	36.2	-1,957	+5.1
Liquefied Natural Gas/Natural Gas	3	191,082	245,503	28.1	34.5	+54,421	+6.5
Refining	1	19,976	20,336	30.0	29.9	+360	-0.1
Mining, Minerals and Other	2	71,175	98,613	23.1	29.4	+27,438	+6.2
Oil and Gas (Exploration and Production)	5	334,205	344,119	25.4	25.7	+9,914	+0.3
Power and Utilities	4	57,845	70,092	17.2	20.4	+12,247	+3.2
Transport, Storage and Distribution	3	18,658	15,226	12.5	9.4	-3,432	-3.1
Full Sector	**28**	**880,427**	**1,049,638**	**26.7**	**30.7**	**+169,211**	**+4.0**

Average hours of training per employee by subsector ranged from 9.4 hours to 56.2. All subsectors, except support services and transport, storage, and distribution, reported an increase in total training hours per employee, although the average hours of training for support services increased. Two subsectors reported slight decreases in average training time per employee (refining and transport storage and distribution). All other subsectors reported increases in average training hours of up to 13.6 per employee. The overall industry increase of four hours of training per employee is a positive indication of the industry's commitment to employee development.

Average Hours of Training Per Employee Per ear



**Calculated on Weighted basis for 28 companies reporting on both workforce an total training hours in 2012 and 2013*

Employee Development Activities

In 2013, companies continued to invest in technical development programmes and evaluating performance and skills. 2013 saw several companies introduce initiatives that went beyond building technical capacities and focused on employees' communication skills and building interest and enthusiasm for development programmes.

In 2013, the Total Research Centre-Qatar (TRC-Q) offered professional training programmes in reservoir engineering that focused on mapping permeability in petroleum carbonate reservoirs. More than 50 people from Qatar Petroleum, Qatargas, Dolphin Energy and Total participated.

Qatalum is working to complete a competency gap analysis, which will identify gaps and priorities to be addressed over the next three years.

ORYX GTL is developing new management information systems that keep the company informed about employee performance. A number of other companies have similar assessment programmes in place and track employee performance to identify training needs.

Established in 2011, TAFAWOOQ is a partnership between Qatar Petroleum, Qatar Shell, and Hamad Bin Khalifa University and focuses on project management and engineering and an elite project Management Centre of Excellence. The TAFAWOOQ integrated programme is based on internationally recognized dimensions of professional competency development.

The Tamayoz programme was established in 2013 to help share ExxonMobil's technical, commercial and operational expertise with its partners in Qatar. The programme is a part of ExxonMobil's pledge to improve capacity in the sector.

Qatargas hosted the Learning Olympics, a variety of interactive activities presented in a sports format that are intended to inform employees of the education and development opportunities available, build understanding of core competencies, and foster a positive culture around learning and development.

Maersk employees participated in "Dealing with the Media" training that helped to build Qataris' leadership and presentation skills, enabling them to represent the company at external events locally and internationally. More than 50 Qataris participated in this training.

WELFARE AND ENGAGEMENT

Employee welfare and engagement help companies in the sector compete for the best talent. Recruiting and retaining excellent people requires attractive compensation packages and other benefits, including career opportunities that make employment in the sector appealing. In addition to financial compensation, companies run activities and programmes that support their employees and families, with a view to enhancing job satisfaction.

Companies use a wide range of methods to engage with their employees. In 2013, these included town hall meetings, 'Ask the CEO' sessions, internal publications, corporate intranets, spot recognition reward schemes, social events, and team building initiatives to name a few.

The sector seeks to comply with all national laws and regulations with regard to the fair treatment of the workforce. Qatari labour laws regulate working hours, youth employment, and worker safety and health. All these measures are enforced by the sector.

Further details about how the sector protects the welfare of employees and contractors in the supply chain can be found in the Health and Safety and chapter of this report.

Employee Satisfaction

One means of evaluating employee welfare involves assessing rates of employee satisfaction. Companies conduct employee satisfaction surveys either annually, or every two years in order to track their success in meeting employee needs and to obtain valuable feedback from their staff. In 2013, only seven companies reported employee satisfaction rates, a low number when compared with other indicators. More companies reporting on this rate will help to ensure employee satisfaction checks are being conducted across the sector.

Employee turnover rates are another way to gauge employee satisfaction. Of the 33 reporting companies in 2013, 11 companies voluntarily reported this. Staff turnover rates ranged from 3 to 9.5%.

Welfare and Engagement Activities

Spot Recognition Programme - Dolphin Energy

Dolphin Energy's spot recognition programme allows line managers to distribute vouchers to employees 'on the spot', without the prior approval of upper management, to recognize excellent performance.

Employee Satisfaction and Engagement Survey - QAFAC

In 2013, QAFAC conducted an employee survey to assess employee engagement and satisfaction, to help shape programmes to better meet employees' needs. The survey helped to identify areas of improvement for QAFAC in the service and opportunities offered to employees. The company will establish groups in 2014 to address the findings of the report.

Employee Relation Committee - Ras Laffan Power Company

At the Ras Laffan Power Company, an employee relations committee was formed in March 2013 under the chairmanship of the Managing Director to address employee grievances and relationship matters.

DIVERSITY AND INCLUSION

The sector aims to increase diversity and create an inclusive environment in the workplace. Diversity for the sector means engaging people from many different backgrounds and cultures, attracting young professionals, maintaining a varied expatriate workforce, and increasing female employment.

The Ministry of Labour stresses the importance of increasing female employment rates in the workforce in technical and non-technical disciplines. The NDS and QNV both make increasing the percentage of Qatari women in the workforce a priority with a goal to increase the number of women in leadership positions in Qatar by 30% by 2016. The NDS also sets a target for increasing diversity as well as enforcing a quota of 2% employment of people with disabilities by 2016.

With regard to inclusion and equal opportunities, many companies have clear policies or statements about their approach to non-discrimination. A typical example taken from one sustainability report states that "Any hostility toward, discrimination against or harassment of any employee based on age, colour, gender, sexual orientation, national origin, religion or any racial, ethnic or other personal characteristic is a violation of [the company's] policies." To support policies like this, companies have put grievance mechanisms in place that allow for anonymous reporting of suspected policy violations.

Female Participation

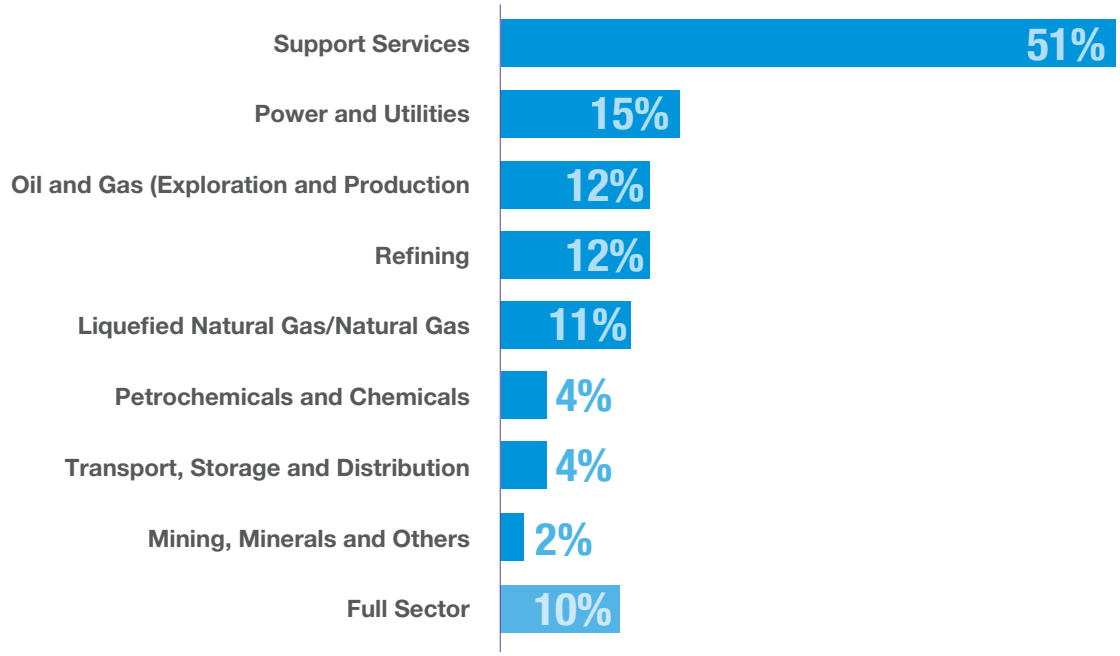
Female employment remains a challenge for the sector. In 2013, 34 companies reported on their female participation rate, which refers to the number of full time female employees as a percentage of total full time employees within the company. In total, the sector employed 3,715 women, equating to a female participation rate of 9.8%. Although the sector now has 39 more female employees than in 2012, this represents a 1% rise, in comparison to a 3.1% increase in the total workforce.

Female Employment

Subsector	Comparable Companies	Female Employment Rate		Number of Females		Year-Over-Year Change	
		2012	2013	2012	2013	# Females	% Change
Support Services	3	40.9%	50.8%	88	67	-21	-24.4%
Power and Utilities	5	13.6%	14.7%	475	526	+50	+10.6%
Oil and Gas (Exploration and Production)	7	12.9%	12.2%	1,807	1,739	-68	-3.8%
Refining	2	11.5%	11.8%	242	251	+10	+4.0%
Liquefied Natural Gas/Natural Gas	3	10.9%	11.0%	741	785	+44	+5.9%
Petrochemicals and Chemicals	8	3.7%	4.1%	163	189	+26	+16.1%
Transport, Storage and Distribution	3	4.4%	4.0%	66	65	-1	-1.9%
Mining, Minerals and Other	3	2.2%	2.0%	94	93	-1	-1.1%
Full Sector	**34**	**10.0%**	**9.8%**	**3,676**	**3,715**	**+39**	**+1.0%**

The support services subsector continues to employ the largest percentage of females, reaching more than 50% in 2013, despite a reduction in the number of females employed. The power and utilities subsector added the largest number of female employees in 2013, increasing the number by 50. While the oil and gas subsector employed 68 fewer females in 2013, the subsector still contributes the largest number of female employees to the sector with 1,739 female employees in 2013.

Subsector Female Employment Rates



**Weighted averages for 34 comparable companies reporting in 2013*

Diversity and Inclusion Activities

Strategies for promoting diversity and inclusion vary within the sector. Maersk has a mandatory diversity and inclusion e-learning tool for its employees, and supports a women's network. QAFAC sponsored the Qatar International Business Women Forum, demonstrating the company's commitment to women in the workforce. QAPCO engages its female employees through its QAPCO Ladies Group. The Ladies Group is part of QAPCO's efforts to support women within the organisation by creating a community and shared activities.

APPENDIX A – PARTICIPATING COMPANIES

Oil and Gas (Exploration and Production)

Companies	Abbreviated Name	MD/ GM/ CEO	Start Date	Products	Website
Qatar Petroleum	QP	 **Dr. Mohammed Bin Saleh Abdulla Al-Sada** Minister of Energy and Industry, Chairman & Managing Director, Qatar Petroleum	1974	Oil and gas exploration and production	www.qp.com.qa
Gulf Drilling International Ltd	GDI	 **Mr. Ibrahim Jassim Abdulrahman Al-Othman Fakhroo** CEO	2004	Oil and gas exploration and production	www.gdi.com.qa
Maersk Oil Qatar A/S	Maersk Oil Qatar	 **Mr. Lewis Affleck** Managing Director	1992	Oil and gas exploration and production	www.maerskoil.com
Occidental Petroleum of Qatar	OPQL	 **Mr. Stephen Kelly** President and General Manager	1994	Oil exploration and production	www.oxy.com
Qatar Petroleum Development Co. Ltd (QPD)	QPD	 **Mr. Satoru Nakanishi** General Manager	1997	Oil exploration and production	www.qpd-jp.com
TOTAL E&P Qatar	TEPQ	 **Mr. Guillaume Chalmin** Managing Director Group Representative	1936	Oil and gas exploration and production	www.total.com
Wintershall Holding GmbH Qatar	Wintershall	 **Juergen Rodefeld** General Manager	1973	Oil exploration	www.wintershall.com
Bunduq Company Limited	Bunduq	 **Mr. Yuri Shiozawa** General Manager	1970	Oil and gas exploration and production	www.bunduq.com

Liquefied Natural Gas/Natural Gas

Companies	Abbreviated Name	MD/ GM/ CEO	Start Date	Products	Website
Dolphin Energy	Dolphin	 **Mr. Adel Ahmad Al-Buainain** General Manager	1999	**Natural gas**	www.dolphinenergy.com
Qatargas Operating Company Ltd	Qatargas	 **Sh. Khalid Khalifa Al-Thani** CEO	1984	Liquefied natural gas, condensate and sulphur; helium and PG	www.qatargas.com
RasGas Company Limited	RasGas	 **Mr. Hamad Rashid Al-Mohannadi** Managing Director	1993	Liquefied natural gas, pipeline gas, condensate, sulphur, LPG and Helium	www.rasgas.com

Refining

Companies	Abbreviated Name	MD/ GM/ CEO	Start Date	Products	Website
ORYX GTL Ltd	ORYX GTL	 **Mr. Abdul Rahman M. Al-Suwaidi** CEO	2003	Gas-to-liquids (GTL)	www.oryxgtl.com
Qatar Shell Service Co. WLL.	Qatar Shell	 **Mr. Wael Sawan** Executive Vice President	2002	Gas-to-liquids (GTL)	www.shell.com.qa

Petrochemicals and Chemicals

Companies	Abbreviated Name	MD/ GM/ CEO	Start Date	Products	Website
Qatar Chemicals Company Ltd	Q-Chem	**Mr. Ahmed Ibrahim Al-Emadi** General Manager	2003	Polyethylene, normal alpha olefins and ethylene	www.qchem.com.qa
Ras Laffan Olefins Company	RLOC	 **Mr. Ahmed Ibrahim Al-Emadi** General Manager	2010	Ethylene	www.rloc.com.qa
Qatar Fertilizer Company	QAFCO	 **Mr. Khalifa Abdulla Al-Sowaidi** Vice Chairman and CEO	1969	Ammonia and urea	www.qafco.com
Qatar Fuel Additives Company Ltd (QAFAC)	QAFAC	 **Mr. Nasser Jeham Al-Kuwari** General Manager	1991	Fuel Additives	www.qafac.com.qa
Qatar Petrochemical Company	QAPCO	**Dr. Mohd Yousef Al-Mulla** Vice Chairman and CEO Board Member & General Manager	1974	Low Density Polyethylene (LDPE)	www.qapco.com
Qatofin Company Limited	QATOFIN	 Vice Chairman and CEO	2000	Polyethylene	www.qatofin.com.qa
Qatar Vinyl Company Ltd	QVC	 **Mr. Hamad Rashed Al-Nuaimi** CEO	1997	Vinyl chloride monomer, ethylene dichloride and caustic soda	www.qvc.com.qa
SEEF Limited	SEEF	 **Mr. Ahmed Hitmi Al-Hitmi** General Manager & Board Member	2004	Paraffin, benzene and heavy alkylate benzene (HAB)	www.seef.com.qa

Power and Utilities

Companies	Abbreviated Name	MD/ GM/ CEO	Start Date	Products	Website
Qatar General Electricity and Water Corporation	KAHRAMAA	 **Eng. Essa bin Hilal Al-Kuwari** President	2000	Power and water distribution	www.km.com.qa
Mesaieed Power Company Ltd	M Power	 **Mr. Abdulmajeed Al-Reyahi** CEO	2007	Power generation	
Qatar Electricity and Water Company	QEWC	 **Mr. Abdul Sattar Al Rasheed** CEO, Ras Abu Fontas Power Plant	1990	Power generation and water desalination	www.qewc.com
Qatar Power Company	Q Power	 **Mr. Jamal Ali Al-Khalaf** Executive Managing Director	2002	Power generation and water desalination	www.qatarpower.net
Ras Girtas Power Company	RGPC	 **Mr. Faisal Obaid Al-Siddiqi** CEO	2009	Power generation and water desalination	
Ras Laffan Power Company	RLPC	 **Mr. Mubarak Al-Nasr** Managing Director	2003	Power generation and water desalination	

Mining, Minerals and Other

Companies	Abbreviated Name	MD/ GM/ CEO	Start Date	Products	Website
Qatar Aluminium Limited	QATALUM	 **Mr. Tom Petter Johansen** CEO	2007	Aluminium products	www.qatalum.com
Qatar National Cement Company	QNCC	 **Mr. Salem Bin Butti Al-Naimi** Chairman & Managing Director	1965	Cement	www.qatarcement.com
Qatar Steel Company	Qatar Steel	 **Mr. Ali Bin Hassan Al Muraikhi** Director & General Manager	1974	Steel	www.qatarsteel.com.qa

Transport Storage and Distribution

Companies	Abbreviated Name	MD/ GM/ CEO	Start Date	Products	Website
Qatar Fuel Company	WOQOD	 **Mr. Ibrahim Jaham Al Kuwari** CEO	2002	Fuel distribution and services stations	www.woqod.com.qa
Qatar Jet Fuel Company	QJet	Vice Chairman & Managing Director	1992	Jet fuel	www.qjetfuel.com
Qatar Gas Transport Company Ltd	NAKILAT	 **Mr. Abdulla Al Sulaiti** Managing Director	2004	Transporting liquefied natural gas	www.nakilat.com.qa
Qatar Shipping Company	Q-Ship	 **Capt. Joseph Coutinho** CEO	1992	Shipping company	www.qship.com

Support Services

Companies	Abbreviated Name	MD/ GM/ CEO	Start Date	Products	Website
ConocoPhillips Ltd	ConocoPhillips Qatar	 **Mr. Gary Sykes** President	2003	Supporting Qatargas3 (Train 6)	www.conocophillips.com
ExxonMobil Qatar Inc.	EMQI	 **Mr. Barton Cahir** President & General Manager	1992	Supporting RasGas and Qatargas joint ventures	www.exxonmobil.com.qa
Saipem S.p.A., Qatar	Saipem	 **Mr. Andrea Palmieri** Branch Manager Qatar	1960	Oil and gas contractor	www.saipem.com

APPENDIX B – SDIR INDICATORS AND DATA METHODOLOGY

Indicators

The SDIR Programme has 42 indicators that are organised in the six sector sustainability areas. The number of measures increased from 33 to 42 in 2013. All companies are requested to report on all of the indicators as a minimum within their sustainability reporting.

Primary SDIR Indicators

Category	Indicator	Unit
Economic Contribution	Revenues	USD
	Production	Variable
	Goods and services sourced locally	%
Climate Change and Energy	Direct energy use	GJ
	Indirect energy use	GJ
	Amount of renewable energy generated	GJ
	Energy exported to the grid	GJ
	Direct GHG emissions (scope 1)	Tonnes Co_2e
	Indirect GHG emissions (scope 2)	Tonnes Co_2e
	Flaring	MMSCM
	Natural gas used	m^3
The Environment	Fresh water used (from purchased)	m^3
	Fresh water used (from company generated)	m^3
	Water discharged (to sea)	m^3
	Water discharged (other than sea)	m^3
	Water recycled or reused	m^3
	SOx emitted	Tonnes
	NOx emitted	Tonnes
	Significant oil spills (> one barrel)	Number
	Volume of spills	Litres
	Total waste disposed	Tonnes
	Total waste recycled	Tonnes
Health and Safety	Work hours (Employees)	Hours
	Work hours (Contractors)	Hours
	Employee fatalities	Number
	Contractor fatalities	Number
	Employee lost time injuries	Number
	Contractor lost time injuries	Number
	Employee total reportable injuries	Number
	Contractor total reportable injuries	Number
	Employee occupational illnesses	Number
	Heat stress events	Number
	Loss of containment (LOC) / process safety incidents	Number
	Emergency response drills	Number
	Incident investigation completion	%
Workforce	Workforce size	Number
	Qatarization	%
	Female employment	%
	Employee satisfaction	%
	Total hours of training provided to employees	Hours
Society	Total social investment budget	USD
	Corruption or human rights incidents	Number

Data Review Methodology

Data is collected from all 36 participating companies on all 42 SDIR indicators. Data is aggregated and used to derive secondary analysis such as ratios, intensities, and proportions. Additional safety data is collected through a separate template. Case studies included in the report are taken from company sustainability reports submitted by individual companies. Together, these sources form the body of data and information presented in this report.

Completeness and Comparable Analysis:
Although data submission is getting nearer to complete coverage, a number of data gaps remain for indicators where some companies have not reported their performance. As a result, aggregate figures for the sector may not always be fully representative. In addition, missing data from previous years makes year-on year performance comparisons difficult. In order to overcome these challenges and achieve the highest level of accuracy, data in this report is typically presented on a two-year comparable basis. This means that calculations use only the set of companies which report on all indicators in question for both 2012 and 2013. Published figures always include the greatest number of companies available within the confines of the comparability criterion.

Percentage completeness in this report is calculated on the basis of the total number of companies for whom an indicator is relevant. An indicator such as flaring may have 100% reporting, although only 18 out of 36 programme participants disclose flaring levels. This is because an indicator like flaring is only applicable to a subset of companies within the wider sector.

Data Accuracy:
Each company is responsible for the accuracy of its data. The SDIR team carry out a review process to ensure data is accurate and within expected ranges. Data points that deviate significantly from the group or from historical trends are investigated, and explanations gathered for major restatements. Data points that remain unresolved or problematic are removed from the data set to ensure the highest quality of analysis possible.

Calculated Figures and Derived Indicators:
Primary indicators are often aggregated to produce figures with units of analysis at the subsector or full sector level. A number of secondary indicators are derived from the primary set of indicators collected from companies. Unlike previous years, aggregate and derived figures are calculated on a weighted basis (with a few exceptions). This means that companies with a small share of total impact only count for a small amount of the sector/subsector total. This weighted approach means that the report ultimately paints a more representative picture of the sector, and is less susceptible to year-on-year changes in reporting boundary or scope.

Although intermediate results are never rounded or truncated, calculated figures such as averages are subject to minor approximation. This is due to the fact that companies report figures with different levels of precision. In certain cases, as when figures include trailing zeros, the significant digits in the raw input data are ambiguous and difficult to determine. The associated error levels are not typically large enough to be material.

Data Clustering:
For consistency of interpretation, companies are assigned to one subsector (see page 10-11 for subsector details). This allows companies and subsectors to be mutually exclusive to one another. An exception to this stratification rule is made for the reporting of production, as companies from different subsectors sometimes produce the same products.

APPENDIX C – GRI AND IPIECA ALIGNMENT

Many company reports have been prepared using guidance from IPIECA and the GRI (G4, G3.1 and OGSS). The table below shows how and where the sector sustainability report aligns with IPIECA and GRI indicators.

Elements	Topics	Page Number	IPIECA Indicators	GRI (G3.1) Indicators
Health and Safety	Personal safety	34-44	HS3	LA7
	Health and welfare	45-51	HS2	LA7, LA8
	Process safety	52-53	HS5	SO9, SO10, PR1, OG13
	Emergency response preparedness	54-55	EN8	SO9, SO10, PR1
	Workforce engagement	56-57	HS1	LA6, LA8
The Environment	Water management	63-69	E6, E9	EN8, EN9, EN10, EN21
	Spills	70	E8	EN23
	Waste management	71-73	E10	EN2, EN22
	Air emissions	74-76	E7	EN19, EN20
	Biodiversity	77	E5	EN12, EN13, EN14
Climate Change and Energy	Energy	80-84	E2, E3	EN3, EN4, EN5, EN6, EN7, EN18
	Climate Change	85-87	E1	EN16, EN17, EN18
	Flaring	88-89	E4	EN16, EN18, OG6
Economic Performance	Contribution to national GDP	92-93	SE5	EC1, EC9
	Sector production and expansion	94-98	–	EC9, OG1
	Economic diversification	99-100	–	EC9
	Indirect economic impact	101-103	SE1, SE7	EC6, EC7, EC9
Social	Community engagement and investment	107-109	SE1, SE4	SO1, EC8, EC1
	Human rights	110-112	SE8, SE9	HR10, HR11
	Business Integrity	113	SE11, SE12	SO2, SO4
Workforce	Workforce overview	117	SE15	LA1
	Qatarization	118-120	SE6	EC7, EC9
	Employee development	121-122	SE17	LA10, LA11
	Welfare and engagement	123	SE16	LA2, LA6, LA9, EC3
	Diversity and inclusion	124-125	SE15	LA13

GRI Key

EC – Economic

EN – Environment

LA – Labour

HR – Human rights

SO – Society

PR – Product responsibility

OG – Oil and gas specific

IPIECA Key

E – Environmental

HS – Health and safety

SE – Social and economic

APPENDIX D – ACRONYMS AND GLOSSARY

Acronyms

ALARP	As Low As Reasonably Possible
CCS	Carbon Capture and Storage
CEO	Chief Executive Officer
COP	Conference of Parties
Co_2e	Carbon Dioxide Equivalent
COM	Community Outreach Programme
CTO	Consent To Operate
DG	HSE Regulations and Enforcement Directorate
EIA	Environmental Impact Assessment
EMS	Environmental Management System
E&P	Exploration and Production
FAR	Fatality Rate
GJ	Gigajoule
GDP	Gross Domestic Product
GGFR	Global Gas Flaring Partnership
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
GTL	Gas-to-Liquids
HMC	Hamad Medical Corporation
HSE	Health, Safety, and Environment
IPCC	Intergovernmental Panel on Climate Change
IPIECA	The International Petroleum Industry Environmental Conservation Association
IQ	Industries Qatar
ISO	International Organization for Standardization
IT	Information Technology
JBOG	Jetty Boil-Off Gas
KPI	Key Performance Indicator
LNG	Liquefied Natural Gas
LOC	Loss of Containment
LTI	Lost Time Injury
LTIR	Lost Time Injury Rate
MAH	Major Accident Hazard
MERS	Middle East Respiratory Syndrome
MIC	Mesaieed Industrial City
MMSCM	Million Metric Standard Cubic Meters
MoE	Ministry of Environment
MoL	Ministry of Labour
Mwh	Megawatt Hour
m^3	Cubic meter
NDS	National Development Strategy
NG	Natural Gas
NOx	Nitrogen Oxides
OECD	Organisation for Economic Co-operation and Development
OGP	International Association of Oil and Gas Producers
QAR	Qatari Riyal
QEZ	Qatar Economic Zone
QF	Qatar Foundation
QP	Qatar Petroleum
QNB	Qatar National Bank
QNV	Qatar National Vision
RLIC	Ras Laffan Industrial City
RoSPA	Royal Society for the Prevention of Accidents
SCH	Supreme Council of Health
SD	Sustainable Development
SDIR	Sustainable Development Industry Reporting Programme
SDMS	Sustainability Data Management System
SMS	Sustainability Management Systems
SOx	Sulphur Oxides
TRI	Total Recordable Injuries
TRIR	Total Recordable Injury Rate
UAE	United Arab Emirates
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
VOC	Volatile Organic Compound

Glossary

Climate Change: A significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years.

Global Reporting Initiative (GRI): A network-based organisation that produces a comprehensive sustainability reporting framework widely used around the world with the aim of mainstreaming disclosure on environmental, social and governance performance.

Greenhouse Gas Emissions: Gas emissions, which contribute to the trapping of heat inside the atmosphere (resulting in the Global Warming phenomenon).

Gulf or Gulf Cooperation Council (GCC): A political and economic union of the Arab states bordering the Arabian Gulf and located on or near the Arabian Peninsula, namely Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates.

IPIECA: The International Petroleum Industry Environmental Conservation Association is the global oil and gas industry association for environmental and social issues.

Qatarization: An initiative by the government of the Qatar to increase the number of Qatari nationals in all joint venture industries and government departments.

Qatar National Vision 2030: A long-term national vision built on the guiding principles of Qatar's Permanent Constitution. It reflects the aspirations of the Qatari people and the resolve of their political leadership. It envisages a vibrant and prosperous country in which there is economic and social justice for all, and in which nature and man are in harmony.

Sustainability: A state in which the current generation can meet their needs without comprising the ability of future generations to meet their own.

Sustainability management: The integrated management of economic, social and environmental issues in a manner that maximizes value for all stakeholders.

Sustainability report: An organisational report that gives information about economic, environmental, social and governance performance.

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Notes

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