2017
ANNUAL REPORT

SBM OFFSHORE

EXPERIENCE MATTERS

- Leverage the multi-disciplinary Life Day and Life 365 campaigns and ensure they meet target audience needs
- Continue early HSSE involvement when pursuing new country entries
- Strengthen line management competencies in HSSE through role-profiles to ensure key HSSE skills are part of the discipline portfolios
- Verify the implementation and application of the improvement actions identified during the International Sustainability Rating System (ISRS) maturity assessment

2.5 ENVIRONMENT

MANAGEMENT APPROACH

For SBM Offshore, managing environmental impact goes beyond compliance to environmental protection and refers also to environmentally friendly innovations in the operation of its FPSOs. Client expectations and requirements are directed by environmental considerations, therefore in parallel with maintaining good operating practices, SBM Offshore's anticipates these expectations and manages its footprint accordingly.

The Company endeavours to operate in an environmentally robust and sustainable manner, in order to minimize impact to local ecosystems as well as proactively protect the environment, paying attention to three key environmental aspects:

- Oil spills – by strictly following set procedures and ensuring measures are in place
- Unnecessary flaring or emissions into the air or discharges into sea – through prevention when possible
- Excessive use of energy and waste – by encouraging reduced consumption, recycling and re-use

Environmental data are tracked on a daily basis, evaluated on a monthly basis and consolidated/ disclosed annually. The results are compared with the previous years. In addition, SBM Offshore's environmental data are benchmarked against the IOGP averages. The results are recorded and reported in accordance with the GRI Standards and IOGP guidelines.

2017 PERFORMANCE

In 2017, the Company continued to expand its environmental initiatives by enhancing existing programs and the development of new ones including:

Key achievements

- Maintenance of all existing environmental certifications (ISO14001) on shore bases and marine units. One of the two new units in Brazil has been ISO14001 and OHSAS18001 certified in 2017, the last unit will undergo the certification process in 2018.
- Launch of the challenge 'Take Care of your Flare' on all Marine Units with the objective to reduce the volume of gas flared under the control of the units and promote local initiatives
- Several waste minimization initiatives in the accommodation areas of the Marine Unit
- Continuous improvement of GHG and CO_2 emissions reporting
- Creation of guidance for emissions calculations methodology
- Implementation of a new tool for Marine Units to perform Control of Substances Hazardous to Health Assessments

Key Targets and results

In 2017 the Company set a global target for all marine units to achieve an improved environmental performance relative to the 2015 IOGP industry average on oil discharged in water, GHG emissions, flaring and energy consumption.

This includes each unit developing its own individual target in terms of flaring reduction on SBM Offshore's account as part of the 'Take Care of your Flare' challenge. Targets ranged from 5 to 25% reduction between units, with a consolidated average of 9.6% reduction compared to 2016 at Company level.

The following Environmental performance was recorded in 2017:

- GHG emissions from energy generation and gas flared relative to the hydrocarbon production decreased significantly compared to 2016. A total of 5,584,850 tonnes of GHG have been produced in 2017, representing 100 tonnes of GHG per thousand tonnes of hydrocarbon produced, which is 29% better than 2016 and 34% better than the industry benchmark[7]. This significant decrease is mainly due to a 50% reduction in the volume of gas flared compared to 2016 (see next point).
- The total gas flared in 2017 was 10.9 tonnes per thousand tonnes of hydrocarbon produced (of which 48% was requested by the client). For the first time, the Company reports a total gas flared per production below the IOGP industry benchmark[8] of 13.6. This represents a 50% improvement compared to the total gas flared in 2016 which is mainly due to the end of commissioning activities of three FPSOs in 2017, the repair of a gas export facility in Angola reducing gas flaring on two of the Angolan units and the continuous efforts made by the fleet to reduce flaring (see below).
- Out of the 12 units which participated in the flaring reduction challenge, seven met their individual target (ranging between 5 and 25% reduction between units). Due to updated reporting methodology in 2017, the tangible impacts of the CO_2 Challenge Season 2 compared to 2016 performance can be measured against total gas flared only (see section 5.1.6).
- The volume of energy consumption used per hydrocarbon produced remains stable compared to 2016 (1.12 gigajoules of energy per tonnes of hydrocarbon produced compared to 1.24 in 2016, which is 22% lower than the industry benchmark[9]).
- The volume of oil discharged to sea per hydrocarbon production also remains stable compared to 2016. The average volume of oil discharged was 2.55 tonnes per million tonnes of hydrocarbon produced (2.59 in 2016), while the IOGP average is 11. The Company performs in this aspect much better than the industry benchmark every year.
- No hydrocarbon spill exceeding one barrel in volume (159L) was reported in 2017, which means that the normalized number of oil spills offshore greater than one barrel per million tonnes of hydrocarbon produced remained 0 for 2017, while the industry benchmark is 0.09[10].

FUTURE

The Company wants to further reduce the environmental impacts under its control in 2018 and has decided to adopt again for 2018 bottom up targets for each unit in order to further reduce gas flared under their control. The targets range between 1 to 20% reduction between units, with a consolidated average of 6% reduction at Company level.

Similar to previous year, SBM Offshore has set the target for all units to achieve better environmental performance than the 2016 IOGP industry benchmark for the other environmental aspects: GHG emissions[11], Gas Flared[12], Energy Consumption[13], Oil in Produced Water[14] and Oil Spills per production[15].

In line with its long-term strategy, SBM Offshore has included the following environmental initiatives as part of its HSSE program for 2018:

- ISO14001 certification of the last unit in Brazil and maintenance of all existing environmental certifications on shore bases and marine units.

[7] Companies participating in the 2015 IOGP benchmark reported 151 tonnes of GHG emissions per thousand tonnes of hydrocarbon produced, Report 2015e, p.24

[8] Companies participating in the 2015 IOGP benchmark reported 13.6 tonnes of gas flared per thousand tonnes of hydrocarbon produced, Report 2015e, p.34

[9] Companies participating in the 2015 IOGP benchmark consumed 1.44 gigajoules of energy for every tonnes of hydrocarbon produced, Report 2015e, p.62

[10] Companies participating in the 2015 IOGP benchmark reported 0.09 oil spill offshore greater than one barrel per miliont tonnes of hydrocarbon produced, Report 2015e, p.70

[11] Target of 151 tonnes of GHG Emissions per thousand tonnes of hydrocarbon produced as reported by companies participating in the 2016 IOGP benchmark (see Report 2016e, p. 24)

[12] Target of 12.9 tonnes of gas flared per thousand tonnes of hydrocarbon produced as reported by companies participating in the 2016 IOGP benchmark (see Report 2016e, p. 34)

[13] Target of 1.4 gigajoules of energy for every tonnes of hydrocarbon produced as reported by companies participating in the 2016 IOGP benchmark (see Report 2016e, p. 32)

[14] Target of 10.2 tonnes of oil discharged to sea per million tonnes of hydrocarbon produced as reported by companies participating in the 2016 IOGP benchmark (see Report 2016e, p.40)

[15] Target of 0.1 oil spill offshore greater than one barrel per milion tonnes of hydrocarbon produced as reported by companies participating in the 2016 IOGP benchmark (see Report 2016e, p.48)

Alignment of the management system with the new ISO14001:2015 standard.
- Reduction of plastic and food waste on units by developing local initiatives and engaging in discussions with catering companies
- Strengthening of Chemical Management & Hazardous Substance (COSHH) Assessments with a new tool
- Continuation of the challenge 'Take Care of your Flare' on all Marine Units with the objective to reduce volume of gas flared under the control of the units.

2.5.1 CO_2 CHALLENGE SEASON 2 'TAKE CARE OF YOUR FLARE'

The CO_2 Challenge is an in-house competition designed to address the issue of climate change with a bottom-up approach, while leveraging expertise to create a competitive edge. Starting in 2015, SBM Offshore tested the creative talents of its engineers by asking them to propose innovative solutions to reduce CO_2 emissions offshore, 'Season 1'.

In 2017 'Season 2', 'Take care of your flare' was launched with an exclusive focus on reducing flaring on the offshore units. The Company challenged its crews to set flare reduction targets and compete against each other for best performance.

Three winners were awarded: one for best performance against the target, one for best performance in total tonnes of CO_2 reduction and one for best performance against hydrocarbons produced.

CO_2 Challenge 'Season 2' Findings

Flaring levels are directly linked to uptime performance of the gas processing facilities on the units. Better operational control on all systems reduces flaring and improves uptime. Flaring is only partially under SBM Offshore's operational control and in order to continue reduction in overall flaring, cooperation with the Company's clients is essential to optimize.

CO_2 Challenge 'Season 3'

Going forward, starting in 2018 'Season 3' will focus on reducing energy consumption and reducing oil in water, as well as the continuation of the flaring reduction targets.

CO_2 Reduction Onshore

Following the success of the CO_2 Challenge, an onshore version was created, the CO_2 Office Challenge. All offices contributed positive results and continue to reduce energy consumption and waste generation per employee.

2.6 OPERATIONAL EXCELLENCE

MANAGEMENT APPROACH

Group Execution Functions are organized to support operational and assurance functions with the goal of achieving operational excellence in all areas of the Company's business.

SBM Offshore's Group Operational Excellence department is dedicated to the maintenance and continuous improvement of the Company's Global Enterprise Management System (GEMS) and the implementation and monitoring of key improvement initiatives notably to:
- Adopt best practice through the application of the ISRS (see section 2.6.2) and Process Safety Management frameworks
- Strengthen the Company's incident reporting and investigation methodologies and tools to expand the scope beyond the remits of Health & Safety and Asset Integrity activities
- Enhance existing Management of Change processes and provide more efficient functionality through the provision of a globally accessible database
- Deploy a revised lessons learned process and application to ensure that lessons are embedded in our ways of working

For more information on Operational Governance, please refer to 3.10.1.

2017 PERFORMANCE

While good progress has been made, due to a number of challenges and the prioritization of topics, the Company has been unable to achieve all of its targets, particularly with respect to tool development and deployment. Our ambition remains to complete the remaining agreed scope within 2018.

Key achievements

- Continued development of GEMS Role Assignment and Workflow tools to enhance user acceptance and improvement of efficiencies
- Publication of a supporting process for the 'Operational Excellence Governance Model' to address business ownership, change control and investment decision making structures for GEMS processes, data-sets, information and applications