



# 2023 ANNUAL REPORT

**BM**  
**OFFSHORE**



## 5.2 REPORTING BOUNDARIES

SBM Offshore not only reports on impacts it causes, but also on impacts it contributes to and impacts that are linked to its activities. In each of the following paragraphs, SBM Offshore elaborates in detail on the boundaries of SBM Offshore's material topics, which are consistent with the boundaries in the previous year. The boundary of a material topic relates to the parts of the organization and supply chain covered in the figures.

### 5.2.1 HEALTH, SAFETY AND SECURITY REPORTING

SBM Offshore's people work in demanding roles and conditions, with different risks to manage. The Health, Safety and Security (HSS) performance indicator boundaries take into account:

- Employees, which include all direct hires, part-time employees, locally-hired agency staff ('direct contractors') in the fabrication sites, offices and offshore workers, i.e. all people working for SBM Offshore.
- Contractors, which include any person employed by a contractor or contractor's subcontractor(s) who is directly involved in execution of prescribed work under a contract with SBM Offshore.

Until 2021, HSS incidents were reported and managed through SBM Offshore's incident management tool (SRS – Single Reporting System), which is a web-based reporting system that is used to collect data on all incidents occurring in all locations where SBM Offshore operates. In 2021, SBM Offshore developed and began using the IFS Incident Management/Corrective Action Preventive Action (IM/CAPA) module for Brazil operations. In 2022, the IFS IM/CAPA module was rolled out to Guyana, Angola and Malaysia operations as well as projects. In 2023, it was further rolled out to the remaining company locations, with the exception of *FPSO Serpentina*.

Safety incidents are reported based on the incident classifications as defined by the IOGP Report 2022s-June 2023. Occupational injuries and illnesses are reported based on the Occupational Safety and Health Administration (OSHA) definition and described in IOGP Report Number 393 2023 – Health Performance Indicators. The main type of work-related injury categories are related to line of fire and slips, trips and falls. Investigations, based on the type, criticality and severity of the event, are performed by specifically identified personnel using methods such as TapRoot® and 5 Whys. SBM Offshore is ISM certified for offshore production fleet and operation offices, as well as being compliant with ISO 45001 as per certification and classification table (section 5.5).

Employees are provided with HSS training to familiarize themselves with SBM Offshore's health, safety, and security rules and regulations. The training topics are based on the hazards identified through the above identification process as well as safety studies and regulatory requirements. The promotion of a speak up culture – as described in section 2.1.1 – contributes to the identification process. Inclusion and non-retaliation are part of the Speak Up Policy.

### 5.2.2 ENVIRONMENTAL REPORTING

#### ATMOSPHERIC EMISSIONS

Emissions reported in SBM Offshore's records include:

- Scope 1 – Direct Emissions
- Scope 2 – Purchased Electricity
- Scope 3 – Business Travel
- Scope 3 – Purchased Goods and Services
- Scope 3 – Downstream Leased Assets

For all reported emissions, CO<sub>2</sub> equivalency is a quantity that describes, for a given mixture and amount of greenhouse gas, the amount of CO<sub>2</sub> that would have the same Global Warming Potential (GWP), when measured over a specified timescale (generally, 100 years).

#### Scope 1 – Direct Emissions

For site emissions related to gas consumed and use of diesel for back-up power generators, SBM Offshore takes an operational control view and uses conversion factors from the Dutch Emission Authority and the website [Co2emissiefactoren.nl](https://co2emissiefactoren.nl) and, for diesel-related factors, the Greenhouse Gas Conversion Factors by the UK Government.

#### Scope 2 – Purchased Electricity

Scope 2 comprises GHG emissions from energy purchased for offices (market-based and location-based).

The reporting scope includes all locations where the headcount is over 10 and yards over which SBM Offshore has full operational control. SBM Offshore reports onshore emissions data for the following locations: Amsterdam, Houston, Kuala Lumpur, Marly, Monaco, Rio de Janeiro, Schiedam, Shanghai, Carros lab, Georgetown, Bangalore, Porto, Singapore, Brazil Shorebases, Luanda Shorebase and Malabo Shorebase.

For the purchased electricity usage, SBM Offshore uses conversion factors to calculate CO<sub>2</sub> equivalents from energy consumed (kWh). Sources used for these conversion factors are, amongst others, the European Environmental Agency, the European Investment Bank and the Association of Issuing Bodies.

#### Scope 3 Emissions

Scope 3 categories reflect an analysis performed using the GHG protocol Technical Guidance for Calculating Scope 3

## 5 ESG INFORMATION

Emissions. During 2021 SBM Offshore applied criteria aligned with SBM Offshore's goals related to emissions and the criteria guided by the GHG Protocol (size of footprint, influence, risk, stakeholder interest, outsourcing, sector guidance and spending/revenue). The following categories are a result of this analysis and is re-considered on an annual basis.

### Scope 3 – Business Travel

This scope entails GHG emissions from flights invoiced and paid for via SBM Offshore's standard travel system in 2023 and the data covers all operating companies. The scope and data accuracy increased due to addition of data from one more travel agency and better information about multi-legged flights. Business travel is determined based on flight data communicated by travel agencies, including mileage per invoice date and a calculated extrapolation of data for the last two weeks of the year. In a few cases where mileage data is missing, it is completed with mileage from a similar route. The GHG emissions relating to business flights are based on third-party documentation on distances and the conversion to CO<sub>2</sub>-equivalent is based on CO<sub>2</sub>emissiefactoren.nl.

### Scope 3 – Purchased Goods and Services

This category consists of GHG emissions associated with the procurement of (capital) goods and services for FPSO projects (hereafter 'projects') that SBM Offshore is executing on behalf of its clients. The following parts of an FPSO are considered in the calculations of the GHG emissions for this category:

- Hull (in Fast4ward® this is MPF) – the marine structure of an FPSO.
- Topsides – the processing facility of an FPSO. Other parts of the FPSO (mooring structure, integration etc.) are not accounted for in this initial GHG calculation due to the data limitations and the limited percentage they add in weight as-build.

SBM Offshore calculates the GHG emissions of its projects via the GHG protocol's average data method. In this phase of raising understanding of emissions during project (EPC) stage, SBM Offshore has chosen a pragmatic approach to assess which components and materials used in projects contribute most to GHG emissions. The outcome of the analysis is initially focused on identifying GHG hot spots. Once these GHG hotspots are identified, SBM Offshore can increase the accuracy of the GHG inventory via supplier engagement and, with that, abate emissions.

### Estimated weight topside

For Topsides the breakdown in materials is based on proposal estimates and not actuals. SBM Offshore used two variants, one for the Guyana and one for the Brazil field, as the basis for calculation for all topsides.

### Estimated weight MPF

For MPF, the breakdown in materials is based on latest actuals. The MPF's are, based on the Fast4Ward®, sister hulls and are similar in design and weight. Since the hulls are based on the same design the same material weights are assumed for each FPSO project that uses the MPF.

To derive the total GHG emission related to projects under construction, SBM Offshore uses the completion rates in a given year. The percentage completed in a given year determines the total allocated emissions in that year.

Calculations for MPF and Topside were done as follows:

1. Break down MPF/Topside into their components.
2. Analyze materials and weights for each component.
3. Retrieve GHG conversion factors of the materials for each component.
4. Apply the following calculations:
  - a. Gross/estimated component weight X GHG conversion – GHG emissions per component.
  - b. SUM GHG emissions of each component – GHG emissions per project.
  - c. GHG emissions per project X annual completion – GHG emissions per projects for the year.
  - d. SUM GHG emissions projects for the year – GHG emissions for all projects for the year.
5. SUM GHG emissions for all Item types – Total GHG emissions for scope 3.1 Procured (Capital) Goods and Services.

SBM Offshore applies the following standards and sources for the above calculations:

- GHG Protocol – Scope 3 Corporate Value Chain Accounting & Reporting Standard.
- Conversion factors from the ecoinvent Database to convert volumes and weights to GHG emissions for the various procured (capital) goods and services.
- SBM Offshore Project Weight Control Reports for the various Items.

### Scope 3 – Downstream Leased Assets

SBM Offshore reports on emission from assets producing and/or storing hydrocarbons under lease contracts. GHG emissions come from the energy consumed (steam boilers, gas turbines and diesel engines) and from gas flared.

The environmental performance of SBM Offshore is reported by region or management area: Brazil, Angola, North America & Caribbean, Asia & Equatorial Guinea. Based on the criteria stated above, SBM Offshore reports on the environmental performance for the following 15 units:

- Brazil – *FPSO Espirito Santo, FPSO Cidade de Paraty, FPSO Cidade de Anchieta, FPSO Cidade de Ilhabela, FPSO Cidade de Marica, FPSO Cidade de Squarema.*



- Angola – FPSO *Mondo*, FPSO *Saxi Batuque* and *N'Goma FPSO*.
- North America & Caribbean – FPSO *Liza Destiny*, FPSO *Liza Unity*<sup>28</sup>, FPSO *Prosperity*<sup>29</sup>, *Thunder Hawk*<sup>30</sup>.
- Asia & Equatorial Guinea – FPSO *Kikeh*, FPSO *Aseng*.

The environmental offshore performance reporting methodology was chosen according to the performance indicators relative to Greenhouse Gas Protocol, GRI Standards, IOGP and IPIECA guidelines. This includes:

- Greenhouse Gases, referred to as GHG which are N<sub>2</sub>O (Nitrous Oxide), CH<sub>4</sub> (Methane) and CO<sub>2</sub> (Carbon Dioxide).
- GHG emissions per hydrocarbon production from flaring and energy generation.
- Non-Greenhouse Gases which are CO (Carbon Monoxide), NO<sub>x</sub> (Nitrogen Oxides), SO<sub>2</sub> (Sulphur Dioxide) and VOCs (Volatile Organic Compounds).
- Gas flared per hydrocarbon production.
- Energy consumption per hydrocarbon production.
- Oil in Produced Water per hydrocarbon production.

The calculation of air emissions from offshore operations units uses the method as described in the EEMS-Atmospheric Emissions Calculations (Issue 1.810a) recommended by Oil and Gas UK. SBM Offshore reports some of its indicators as a weighted average, calculated pro rata over the volume of hydrocarbon production per region. This is in line with the IOGP Environmental Performance Indicators. The GHG-intensity figures in sections 2.1.7 and 5.3.2 use hydrocarbon production as a denominator, being the standard metric used in the industry.

## OFFSHORE ENERGY CONSUMPTION

The energy used to produce oil and gas covers a range of activities, including:

- Driving pumps producing the hydrocarbons or reinjecting produced water.
- Heating produced oil for separation.
- Producing steam.
- Powering compressors to reinject produced gas.
- Driving turbines to generate electricity needed for operational activities.

The main source of energy consumption of offshore units is fuel gas and marine gas oil: the calculation of their volumes in Gigajoules being a function of calorific values and conversion factors from Oil and Gas UK. The energy intensity figures in section 5.3.2 use hydrocarbon

production as a denominator, being the standard metric used in the industry.

## OIL IN PRODUCED WATER DISCHARGES

Produced water is a high volume liquid discharge generated during the production of oil and gas. After extraction, produced water is separated and treated (de-oiled) before discharge to surface water. The quality of produced water is most widely expressed in terms of its oil content. Limits are imposed on the concentration of oil in the effluent discharge stream or discharge is limited where reinjection back into the reservoir is permitted.

The overall efficiency of the oil in water treatment and, as applicable, reinjection can be expressed as tonnes of oil discharged per million tonnes of hydrocarbon produced.

Incidental environmental releases to air, water or land from the offshore operations units are reported using the data recorded in the SBM Offshore Incident Management tool. SBM Offshore has embedded a methodology for calculating the estimated discharge and subsequent classification within the Incident Management tool.

## CHANGES IN REPORTING

As part of continuous improvement, SBM offshore regularly reviews and updates as required its environmental emissions calculations methodology.

Note that in 2023, emissions associated with the SBM Offshore 'Normand Installer' Installation Vessel have been assessed. They have however not been included at this stage to the overall reported emissions under the Scope 3 – Downstream Leased Assets Category as the Installation Vessel is chartered to client projects. These emissions represent 12,240 tonnes CO<sub>2</sub>e in 2023, which is not material in this category (0.2% of Scope 3 – Downstream Leased Assets emissions).

FPSO *Liza Unity* was sold to ExxonMobil Guyana on November 9, 2023. From that date on, its emissions no longer are part of Scope 3 – Downstream Leased Assets. The 98,459.10 tonnes of CO<sub>2</sub>e of associated emissions represent 2% overall reported emissions; this amount is not material for the year 2023 hence not reported in the numbers provided under the section Scope 3 – Downstream Leased Assets. Note however that all other indicators of this table are unaffected by this change. SBM Offshore is looking into the reclassification of above emissions volume.

In 2023, water emissions are reported more accurately and now account for produced water discharges from both slop tanks and from topsides (process) directly.

<sup>28</sup> Note that FPSO *Liza Unity* was sold to ExxonMobil Guyana on November 9, 2023. Since that day, the unit emissions are falling under the Scope 3 Use of Sold Products category.

<sup>29</sup> Note that FPSO *Prosperity* reached first oil end of 2023, hence the annual flare target does not apply.

<sup>30</sup> Note that SBM Offshore does not provide operation and maintenance services to *Thunder Hawk*, hence the annual flare target mentioned in section 2.1.7 and the water discharge target mentioned in section 2.2 do not apply.

## 5 ESG INFORMATION

### Restatement – Scope 1 and Scope 2 emissions

During 2023, SBM Offshore gained access to new data related to energy consumption. It concerned the consumption of gas in the laboratory site in France and the use of back-up generators for power consumption by the owner of the building in Angola. This resulted in an increase in Scope 1 disclosure data. For 2022 numbers, the restatement represents an increase of 365 tonnes of CO<sub>2</sub>e – from 172 tonnes to 537 tonnes of CO<sub>2</sub>e.

For Scope 2 emissions, SBM Offshore found a miscalculation in its Netherlands energy consumption, impacting emissions as well. The location-based emissions for 2022 have changed from 2,140 tonnes of CO<sub>2</sub>e to 2,039 tonnes, the market-based emissions from 1,280 to 1,351 tonnes of CO<sub>2</sub>e and energy use in offices from 26,082 GJ to 31,182 GJ.

### 5.2.3 PROCESS SAFETY REPORTING

A Loss of Primary Containment (LOPC) is defined as an unplanned or uncontrolled release of any material from primary containment, including non-toxic and non-flammable materials (e.g. steam, hot condensate, nitrogen, compressed CO<sub>2</sub> or compressed air).

A Tier 1 PSE is defined as an LOPC from a process system that meets criteria defined in API RP 754.

LOPC events are reported in SBM Offshore's reporting system as highlighted in sections 2.1.2 and 5.3. This system includes a built-in calculation tool to assist the user in determining the release quantity of LOPC events. All LOPCs are analysed to identify those considered to be PSEs as per API RP 754. Process Safety KPIs used by SBM Offshore include the number of Tier 1 PSEs.

SBM Offshore encourages employees and contractors to report the PSE minor LOPC (weeps and seeps) and precursors (e.g. integrity conditions, losing items), using them as a basis for leading initiatives aiming at minimizing the probability of major events occurring.

For the purposes of incident reporting, SBM Offshore reports against the three levels of incident Tier used by IOGP 456/ API 754. Tier 1: All events having actual severity of 4 or 5 as defined in the Common Thresholds Matrix. Tier 2: All events having an actual severity of 3 as defined in the Common Thresholds Matrix. Tier 3: All events having actual severity of 1 or 2 as defined in the Common Thresholds Matrix.

### 5.2.4 HUMAN RESOURCES REPORTING

SBM Offshore's Human Resources (HR) data covers the global workforce and is broken down by region (continents) and employment type. The performance indicators report on the workforce status at year-end December 31, 2023. They include all staff assigned on unlimited or fixed-term contracts, employee new hires and departures, the total number of locally-employed staff from agencies and all crew working on board the offshore operations units and shore bases.

#### HEADCOUNT, TURNOVER, EQUAL REMUNERATION AND NATIONALIZATION

Human Resources considers:

- a 'Direct hire' employee as a staff member holding a labor contract for either an unlimited or a defined period (or an offer letter for an unlimited period in the USA). Direct hires are recorded on the payroll, directly paid by one entity of SBM Offshore (including joint ventures). Direct hires perform mainly managerial, engineering and support activities.
- a 'Contractor' as an individual performing work for or on behalf of SBM Offshore. A contractor is not recognized as an employee under national law or practice (contractors do not form part of any of SBM Offshore's company payroll. Contractors issue invoices for services rendered). Contractors work on projects using their expertise to perform engineering or technical activities, especially on site.
- a 'Subcontractor' as an individual excluded from the headcount because subcontractors are not considered as staff in the HR headcount breakdown structure. Subcontractors are managed as a temporary service and are not covered by HR processes and policies. Yet, SBM Offshore has rigorous processes and procedures in place for subcontractors.

SBM Offshore includes the PAENAL Yard in Angola in its reporting scope, based on partial ownership and operational control, including human resource activities and social responsibility for the employees.

SBM Offshore's headcount figures are based on the number of people, as individuals, that are working for SBM Offshore at a specific given time. Headcount includes all types of staff independently from their contract or their work schedule. The Annual Report figures are based on the headcount at December 31, 2023.

In principle, reporting on headcount includes contractors, while turnover only includes direct hires (no contractors). Turnover has been calculated as the number of employees who have left SBM Offshore (between January 1 and December 31, 2023) compared with the aggregate of the