



OFFSHORE

ENERGY. COMMITTED.

ANNUAL REPORT 2018

5.3.2 ENVIRONMENT

Emissions & Energy

	Year to Year		2018 – Regional Breakdown			
	2018	2017	Brazil	Angola	North America & Equatorial Guinea	Asia
Number of offshore units (vessels)	13	14	7	3	2	1
SBM Offshore Production						
Hydrocarbon Production (tonnes)	52,207,616	55,914,824	41,000,528	9,233,984	1,929,401	43,702
Energy Consumption						
Offshore Energy Consumption – Scope 1 in GJ ¹	57,993,254	62,746,663	39,316,180	14,907,625	3,717,660	51,789
Offshore Energy consumption per production ²	1.11	1.12	0.96	1.61	1.93	1.19
Onshore Energy Consumption – Scope 1 + Scope 2 in GJ ¹	40,538	34,397				
Total Energy Consumption – Scope 1 + Scope 2 in GJ³	58,033,793	62,781,060				
Emissions – Offshore						
GHG Scope 1						
Carbon dioxide (CO ₂) in tonnes	4,764,227	5,193,405	2,634,046	1,874,043	252,481	3,658
Methane (CH ₄) in tonnes	10,132	11,917	2,736	7,012	383	0.02
Nitrous oxide (N ₂ O) in tonnes	295	314	184	93	17	0.25
Volume of GHG⁴	5,105,292	5,584,850	2,757,337	2,077,107	267,115	3,734
GHG per production offshore – Scope 1⁵	97.79	99.88	67.25	224.94	138.44	85.44
Flaring						
Total Gas Flared per production ⁶	9.81	10.92	2.84	40.90	9.46	-
Gas Flared on SBM Offshore account per production ⁶	3.70	5.68	2.62	8.56	3.56	-
Proportion of Gas Flared on SBM Offshore account	38%	52%	92%	21%	38%	n.a.
Other/Air Pollution – Non Greenhouse Gas Emissions						
Carbon monoxide (CO) in tonnes	6,491	7,220	2,925	3,257	309	0.88
Nitrogen oxides (NOx)	7,184	7,578	4,719	2,030	428	6.76
Sulphur dioxides (SO ₂)	1,448	7,735	49	44	1,350	4.57
Volatile organic compounds (VOCs)	1,068	1,268	262	766	39	0.12

1 GJ = gigajoule

2 gigajoule of energy per tonnes of hydrocarbon production

3 GJ = gigajoule, energy from fuel gas and marine gas oil

4 GHG = Greenhouse Gas Emissions; in tonnes of CO₂ equivalents

5 tonnes of Greenhouse Gas Emissions per thousand tonnes of hydrocarbon production

6 tonnes of gas flared per thousand tonnes of hydrocarbon production

5 NON-FINANCIAL DATA

Emissions & Energy (continued)

	Year to Year		2018 – Regional Breakdown				
	2018	2017	Brazil	Angola	North America & Equatorial Guinea	Asia	Europe
GHG – Scope 1 (from buildings)							
Onshore Scope 1 energy consumption ¹	988,918	827,221	148,353	n.a. ²	0 ³	0 ³	840,565
Onshore Scope 1 emissions ⁴	194	190	3	n.a. ²	0 ³	0 ³	191
GHG – Scope 2 (from buildings)							
Onshore Scope 2 energy consumption ⁵	10,271,774	8,727,549	1,231,097	n.a. ²	4,270,089	611,783	4,158,805
Onshore Scope 2 emissions ⁴	3,880	3,608	121	n.a. ²	2,584	411	765
GHG – Scope 3 (from air travel)							
Air travel emissions	17,529	12,343					
Emissions Total (Onshore + Offshore)							
Total Scope 1 Emissions ⁴	5,105,486	5,585,040	2,757,340	2,077,107	267,115	3,734	191
Total Scope 2 Emissions ⁴	3,880	3,608	121	n.a. ²	2,584	411	765
Total Scope 3 Emissions ⁴	17,529	12,343	3,822	n.a. ²	2,665	679	10,363
Total Emissions (Scope 1 + Scope 2 + Scope 3)⁴	5,126,895	5,600,992	2,761,283	2,077,107	272,364	4,824	11,319

¹ kWh, energy from fuel

² Data not available because Angola shorebase is not in scope. See section 5.2.2. for details.

³ The data represents the office and not the shorebase as it is out of scope. See section 5.2.2. for details.

⁴ tonnes of CO₂ equivalents

⁵ kWh, energy from purchased electricity

Discharges

	Year to Year		2018 – Regional Breakdown			
	2018	2017	Brazil	Angola	North America & Equatorial Guinea	Asia
Number of offshore units (vessels)	13	14	7	3	2	1
Discharges						
Quantity of oil in produced water discharges in tonnes per million tonnes of hydrocarbon production	3.50	2.55	0.85	12.88	15.18	N.A
Spills						
Spills (oil and chemicals) with release to sea (number)	6	13	4	1	1	-
Oil spills with release to sea (number)	2	12	1	1	-	-
Volume of Oil spills (m ³)	0.325	0.006	0.16500	0.15890	0.0015	-
Number of Oil spills > 1 barrel (159 L)	-	-	-	-	-	-
Number of Oil spills > 1 barrel (159 L) per million tonnes of hydrocarbon production	-	-	-	-	-	-
Waste						
Restricted Waste (kg)	2,026,018	2,706,168	1,460,706	100,779	463,233	1,300
Non Restricted Waste (kg)	1,406,838	1,573,654	913,416	344,970	139,852	8,600
Total Waste (kg)	3,432,856	4,279,822	2,374,122	445,749	603,085	9,900

5.3.3 HUMAN RESOURCES

Headcount by Employee Type

	Grand Total	Total		Ratios
		Direct Hire	Contractor	
				% of Contractor Employees
Africa	694	499	195	28%
Asia	414	340	74	18%
Europe	1,549	1,327	222	14%
North America	345	322	23	7%
South America	1,307	1,192	115	9%
Other	36	12	24	67%
Total	4,345	3,692	653	15%
Construction yards (BRASA & PAENAL)	395	387	8	2%
Grand Total	4,740	4,079	661	14%

Direct Hires Headcount by Location

