



ESG datasheet 2021



March 2022



Introduction

This ESG datasheet aims to provide a consolidated overview of bp's non-financial performance. Metrics included in this datasheet cover our activities during the period 1 January to 31 December for the years indicated.

Performance data included in this datasheet is discussed further in the sustainability report 2021. The datasheet should be read in conjunction with the sustainability report and is not a substitute for it. The report is available at bp.com/sustainability.

How we report ESG data

As we transition from an International Oil Company to an Integrated Energy Company, we are reinventing our old business model. Our upstream/downstream business model was in place up to 31 December 2020 and that is how we previously reported our ESG data.

We transitioned to our new business model on 1 January 2021, and this is reflected in how we have reported selected ESG data for 2021.

We report group-level data and now provide a breakdown for production and refining. We think this breakdown is most relevant to aid understanding of our performance, in particular GHG emissions.

Due to these changes in our ESG reporting, it is not possible to restate prior year data on a new segmental basis. For historical data reported against the old upstream/downstream business model, please see the ESG datasheets for prior reporting years, available at bp.com/reportingcentre.

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Reports and frameworks




Copies of all of bp's key reports, and an archive, can also be found in our reporting centre:

bp.com/reportingcentre






Reports

-  [Annual report and form 20-F 2021](#)
-  [Diversity, equity & inclusion report 2020](#)
-  [Energy outlook 2022](#)
-  [Gender and ethnicity pay gap report 2021](#)
-  [Net zero ambition report](#)
-  [Our participation in trade associations: climate – 2021 progress update](#)
-  [Payments to governments 2020](#)
-  [Protected areas 2021](#)
-  [Modern slavery and human trafficking statement 2020](#)
-  [Statistical review of world energy 2021](#)
-  [Sustainability report 2021](#)
-  [Tax report 2020](#)

Reporting frameworks

-  [GRI standards index](#)
-  [SASB index](#)
-  [TCFD energy group metrics index](#)
-  [UN global compact communication on progress](#)

Policies and positions

-  [bp's code of conduct](#)
-  [bp environmental policy](#)
-  [bp's expectations of its suppliers](#)
-  [bp labour rights and modern slavery principles](#)
-  [Business and human rights policy](#)
-  [Our biodiversity position](#)

Metrics subject to assurance for 2021

The selected sustainability information below were subject to limited assurance by Deloitte LLP in accordance with the International Standard for Assurance Engagements ("ISAE") 3000 (Revised). Please see the sustainability report 2021 for Deloitte's independent assurance statement, the report is available at bp.com/sustainability. An associated 'Basis of reporting' document is available on bp.com/basisofreporting.

Safety indicators:

1. Total recordable injury frequency (TRIF)
2. Total day away from work case frequency (DAFWCF)
3. Total fatalities
4. Number of oil spills
5. Process safety events (tier 1 and tier 2)

Environment indicators:

6. Scope 1 (direct) GHG emissions (operational boundary) (MtCO₂e) (aim 1)
7. Scope 1 (direct) GHG emissions from UK locations (operational boundary) (MtCO₂e) (aim 1)
8. Scope 1 (direct) GHG emissions from global locations (excluding UK and offshore) (operational boundary) (MtCO₂e) (aim 1)
9. Scope 2 (indirect) GHG emissions (operational boundary) (MtCO₂e) (aim 1)
10. Scope 2 (indirect) GHG emissions from UK and offshore locations (operational boundary) (MtCO₂e) (aim 1)
11. Scope 2 (indirect) GHG emissions from global locations (excluding UK and offshore) (operational boundary) (MtCO₂e) (aim 1)
12. Scope 1 (direct) GHG emissions (equity boundary) (MtCO₂e) (aim 1)
13. Scope 2 (indirect) GHG emissions (equity boundary) (MtCO₂e) (aim 1)
14. Cumulative total sustainable emissions reductions (SERs) (MtCO₂e) (aim 1)
15. Scope 1 (direct) carbon dioxide emissions (operational boundary) (MtCO₂) (aim 1)
16. Scope 1 (direct) methane emissions (operational boundary) (Mte) (aim 1)
17. Emissions from the carbon in our upstream oil and gas production (MtCO₂) (aim 2)
18. Average emissions intensity of our marketed energy products (gCO₂e/MJ) (aim 3)
19. Methane intensity (%) (aim 4)
20. Energy consumption for UK and offshore locations (operational boundary) (GWh, base units of kWh)
21. Energy consumption for global locations (excluding UK and offshore) (operational boundary) (GWh, base units of kWh)

Net zero

Metric	Unit	2017	2018	2019	2020	2021
Net Zero aims						
Aim 1 – Scope 1 (direct) and Scope 2 (indirect) greenhouse gas emissions ^a	MtCO ₂ e	56.6	54.2	54.4	45.5	35.6
Aim 2 – Emissions from the carbon in our upstream oil and gas production (our Scope 3 aim) ^{b,c}	MtCO ₂	–	–	360.9	327.6	303.6
Aim 3 – Average emissions intensity of our marketed energy products ^{d,e}	gCO ₂ e/MJ	–	–	79 (79.0)	79 (78.6)	79 (79.1)
Refined energy products emissions intensity ^e	gCO ₂ e/MJ	–	–	93 (92.7)	92 (92.4)	92 (92.4)
Gas products emissions intensity ^e	gCO ₂ e/MJ	–	–	71 (71.4)	71 (71.4)	72 (71.5)
Bioproducts emissions intensity ^e	gCO ₂ e/MJ	–	–	29 (28.8)	28 (28.2)	27 (26.8)
Power products emissions intensity ^e	gCO ₂ e/MJ	–	–	44 (43.6)	43 (42.9)	38 (37.8)
Aggregate lifecycle emissions associated with marketing sales of energy products ^f	MtCO ₂ e	–	–	993.0	858.3	876.5
Aggregate energy associated with marketing sales of energy products ^g	PJ			12,570	10,924	11,086
Aim 4 – Methane intensity ^{h,i}	%	0.2	0.16	0.14	0.12	0.07
Aim 5 – Amount invested in low carbon activities ^j	\$ million	–	>500	>500	750	2,191

a Operational control data comprises 100% of emissions from activities operated by bp, going beyond the IPIECA guidelines by including emissions from certain other activities such as contracted drilling activities.

b The baseline year for our aims 1, 2 and 3 is 2019. Following publication of the ESG Datasheet 2020, we identified minor data reporting corrections for the 2019 production volumes used in the calculation of the reported 2019 figure for aim 2. We are showing the resulting adjusted figure for 2019 (360.9 MteCO₂e compared to the 360.6 MteCO₂e disclosed in the ESG Datasheet 2020). As a result of mathematical rounding, this correction does not impact the 2019 aim 2 emissions published in the bp Annual Report and Form 20-F 2020 or the bp Sustainability Report 2020.

c Estimated CO₂ emissions from the assumed combustion of upstream production of crude oil, natural gas and natural gas liquids (NGLs) based on bp's net share of production, excluding bp's share of production in Rosneft. On 27 February 2022, following the military action in Ukraine, the bp board announced that bp intends to exit its 19.75% shareholding in Rosneft Oil Company (Rosneft). It is assumed that all produced volumes undergo full stoichiometric combustion to CO₂. These emissions are broadly equivalent to the GHG Protocol, Scope 3, category 11, with the specific scope of upstream production volumes.

d The weighted average GHG emissions per unit of energy delivered (in gCO₂e/MJ), estimated in respect of marketing sales of energy products. GHG emissions are estimated on a lifecycle basis covering production, distribution and use of the relevant products (assuming full stoichiometric combustion of the product to CO₂).

e We now report carbon intensity for aim 3 to the nearest whole number in gCO₂e/MJ. Following publication of the 2020 bp Annual Report and Form 20-F, sustainability report and ESG datasheet, we identified minor data reporting corrections and implemented methodological improvements which have impacted the previously reported aim 3 figures. Recognizing that amendments and methodological enhancements may continue to occur in the future, we believe that the rounding of aim 3 figures in this way provides a more reliable and consistent representation of our performance. Since this is the first year of reporting on this basis, our ESG data sheet on bp.com also includes carbon intensity on the prior basis of rounding to 1 decimal place (see figures in parentheses).

f Aggregate lifecycle GHG emissions associated with bp's marketing sales of energy products, as determined in the calculation of the average emissions intensity of our marketed energy products.

g Aggregate energy associated with marketing sales of energy products, as determined in the calculation of the average emissions intensity of our marketed energy products, with electricity represented as fossil equivalence of sold energy. 1 PJ (Petajoule) = 1 billion (10¹⁵) MJ.

h Methane intensity refers to the amount of methane emissions from bp's operated upstream oil and gas assets as a percentage of the total gas that goes to market from those operations. Our methodology is aligned with the Oil and Gas Climate Initiative's (OGCI).

i Methane intensity is currently calculated using our existing methodology and, while it reflects progress in reducing methane emissions, will not directly correlate with progress towards delivering the 2025 target under aim 4.

j In 2021, capital expenditure against our aim 5 activities has increased from \$750 million in 2020 to nearly \$2.2 billion, the majority of which related to investments in offshore wind, electric vehicle charging infrastructure and solar.

Greenhouse gas emissions and energy^k

Metric	Unit	2017	2018	2019	2020	2021
GHG – Operational control^l						
Scope 1 (direct) greenhouse gas emissions ^m	MtCO ₂ e	50.5	48.8	49.2	41.7	33.2
production	MtCO ₂ e	–	–	–	–	15.5
refining	MtCO ₂ e	–	–	–	–	16.9
Scope 1 (direct) carbon dioxide emissions	MtCO ₂ e	47.8	46.4	46.8	39.8	32.0
production	MtCO ₂ e	–	–	–	–	14.4
refining	MtCO ₂ e	–	–	–	–	16.9
Scope 1 (direct) methane emissions	Mt	0.11	0.09	0.10	0.07	0.05
production	Mt	–	–	–	–	0.04
refining	Mt	–	–	–	–	0.00
Sustainable GHG emissions reductions (Scope 1 and 2) ⁿ	MtCO ₂ e	0.5	1.3	1.4	1.0	1.6
Scope 2 (indirect) emissions	MtCO ₂ e	6.1	5.4	5.2	3.8	2.4
production	MtCO ₂ e	–	–	–	–	0.0
refining	MtCO ₂ e	–	–	–	–	2.2
Greenhouse gas intensity (Scope 1 and 2)						
production ^o	tCO ₂ e per thousand boe of production	–	–	–	–	15.9
refineries ^p	tCO ₂ e per utilized equivalent distillation capacity	–	–	–	–	1,060
petrochemicals ^q	tCO ₂ e per thousand tonnes of production	–	–	–	–	688
Methane intensity ^r	%	0.2	0.16	0.14	0.12	0.07
Flaring ^s	kt	1,987	1,634	1,395	831	967

Metric	Unit	2017	2018	2019	2020	2021
GHG – Equity basis^t						
Scope 1 (direct) greenhouse gas emissions ^m	MtCO ₂ e	49.4	46.5	46.0	41.3	36.5
production	MtCO ₂ e	–	–	–	–	17.7
refining	MtCO ₂ e	–	–	–	–	17.5
Scope 1 (direct) carbon dioxide emissions	MtCO ₂ e	45.8	43.3	43.0	39.1	34.8
production	MtCO ₂ e	–	–	–	–	16.0
refining	MtCO ₂ e	–	–	–	–	17.5
Scope 1 (direct) methane emissions	Mt	0.15	0.13	0.12	0.09	0.07
production	Mt	–	–	–	–	0.07
refining	Mt	–	–	–	–	0.00
Sustainable GHG emissions reductions (Scope 1 and 2) ⁿ	MtCO ₂ e	0.4	0.6	0.8	0.6	1.7
Scope 2 (indirect) emissions	MtCO ₂ e	6.8	5.7	5.7	4.2	2.6
production	MtCO ₂ e	–	–	–	–	0.2
refining	MtCO ₂ e	–	–	–	–	2.0
Greenhouse gas intensity (Scope 1 and 2)						
production ^u	tCO ₂ e per thousand boe of production	–	–	–	–	22.4
refineries ^v	tCO ₂ e per utilized equivalent distillation capacity	–	–	–	–	1,067
petrochemicals	tCO ₂ e per thousand tonnes of production	–	–	–	–	688

Greenhouse gas emissions and energy

Metric	Unit	2017	2018	2019	2020	2021
Energy – Operational control ^l						
Energy consumption ^w	GWh	–	–	–	–	128,805
production	GWh	–	–	–	–	46,033
refining	GWh	–	–	–	–	79,177
Energy intensity						
production ^x	GJ per thousand boe of production	–	–	–	–	169.8
refineries ^y	Energy intensity performance index (indexed to 2010)	104.4	103.9	104.5	106.5	102.8
petrochemicals ^z	GJ per tonnes of production	–	–	–	–	11.5
Energy consumption – Streamlined Energy and Carbon Reporting (SECR) ^{aa}						
UK and offshore ^{bb}	GWh/base units kWh	–	–	–	7,005	4,386
Global (excluding UK and offshore) ^{cc}	GWh/base units kWh	–	–	–	172,999	124,419

k bp total figures and “production” data for GHG emissions and energy include bpx (onshore US operations).

l Operational control data comprises 100% of emissions from activities operated by bp, going beyond the IPIECA guidelines by including emissions from certain other activities such as contracted drilling activities.

m We provide data on GHG emissions material to our businesses on a carbon dioxide-equivalent basis. This includes CO₂ and methane for Scope 1 emissions.

n Sustainable emissions reductions (SERs) result from actions or interventions that have led to ongoing reductions in Scope 1 (direct) and/or Scope 2 (indirect) greenhouse gas (GHG) emissions (carbon dioxide and methane) such that GHG emissions would have been higher in the reporting year if the intervention had not taken place. SERs must meet three criteria: a specific intervention that has reduced GHG emissions, the reduction must be quantifiable and the reduction is expected to be ongoing. Reductions are reportable for a 12-month period from the start of the intervention/action.

o Scope 1 (direct) and Scope 2 (indirect) GHG emissions in tCO₂e from bp operated production assets per thousand boe of gross upstream oil and gas production.

p Scope 1 (direct) and Scope 2 (indirect) GHG emissions in tCO₂e from bp operated refineries per utilized equivalent distillation capacity.

q Scope 1 (direct) and Scope 2 (indirect) GHG emissions in tCO₂e from bp operated petrochemical facilities per thousand tonnes of petrochemicals produced.

r Methane intensity refers to the amount of methane emissions from bp’s operated upstream oil and gas assets as a percentage of the total gas that goes to market from those operations. Our methodology is aligned with the Oil and Gas Climate Initiative’s (OGCI). Methane intensity was previously reported to one decimal place but is now reported to two, in order to better demonstrate year-on-year changes.

s We report the total hydrocarbons flared from our upstream operations.

t bp equity share data comprises 100% of emissions from subsidiaries and the percentage of emissions equivalent to our share of joint arrangements and associates, other than bp’s share of Rosneft. On 27 February 2022, following the military action in Ukraine, the bp board announced that bp intends to exit its 19.75% shareholding in Rosneft Oil Company (Rosneft).

u bp equity Scope 1 (direct) and Scope 2 (indirect) GHG emissions in tCO₂e from production assets per thousand boe of upstream oil and gas production. This replaces the previous bp equity upstream greenhouse gas intensity which included only Scope 1 (direct) GHG emissions in the numerator.

v bp equity Scope 1 (direct) and Scope 2 (indirect) GHG emissions in tCO₂e from refineries per utilized equivalent distillation capacity. This replaces the previous bp equity refining greenhouse gas intensity which included only Scope 1 (direct) GHG emissions in the numerator.

w Total energy consumption in line with Streamlined Energy and Carbon Reporting (SECR). This replaces the total energy consumed metric which used total primary energy consumption.

x Total energy consumption in GJ from bp operated production assets per thousand boe of upstream oil and gas production. This replaces the upstream (production/consumption loss) metric.

y Based on Solomon Associates Energy Intensity Index methodology.

z Total energy consumption in GJ from bp operated petrochemicals facilities per thousand tonnes of petrochemical production. This replaces the previous petrochemicals (energy intensity) metric which included total primary energy consumption in the numerator.

aa Energy content of flared or vented gas is excluded from energy consumption reported as although they reflect loss of energy resources, they do not reflect energy use required for production or manufacturing of products.

bb UK and offshore energy consumption 4,386,000,000kWh in 2021.

cc Global (excluding UK and offshore) energy consumption 124,419,000,000kWh in 2021.

Safety^{dd}

Metric	Unit	2017	2018	2019	2020	2021
Personal safety^{ee}						
Fatalities – workforce ^{ff}	#	1	1	2	1	1
employee	#	1	0	1	1	0
contractor	#	0	1	1	0	1
Day away from work cases (DAFWC) – workforce ^{gg}	#	97	79	77	58	56
employee	#	41	33	29	19	18
contractor	#	56	46	48	39	38
Day away from work cases (DAFWC) – workforce – production ^{gg}	#	–	–	–	–	6
employee	#	–	–	–	–	0
contractor	#	–	–	–	–	6
Day away from work cases (DAFWC) – workforce – refining ^{gg}	#	–	–	–	–	14
employee	#	–	–	–	–	6
contractor	#	–	–	–	–	8
Day away from work case frequency (DAFWCF) – workforce ^{hh}	DAFWC per 200,000 hours worked	0.055	0.048	0.047	0.044	0.051
employee	DAFWC per 200,000 hours worked	0.056	0.046	0.042	0.031	0.035
contractor	DAFWC per 200,000 hours worked	0.054	0.049	0.050	0.054	0.064
Day away from work case frequency (DAFWCF) – workforce – production ^{hh}	DAFWC per 200,000 hours worked	–	–	–	–	0.046
employee	DAFWC per 200,000 hours worked	–	–	–	–	0.000
contractor	DAFWC per 200,000 hours worked	–	–	–	–	0.072

Metric	Unit	2017	2018	2019	2020	2021
Day away from work case frequency (DAFWCF) – workforce – refining ^{hh}	DAFWC per 200,000 hours worked	–	–	–	–	0.089
employee	DAFWC per 200,000 hours worked	–	–	–	–	0.090
contractor	DAFWC per 200,000 hours worked	–	–	–	–	0.088
Recordable injuries (RI) – workforce ⁱⁱ	#	384	328	273	174	181
employee	#	147	108	88	57	60
contractor	#	237	220	185	117	121
Recordable injuries (RI) – workforce – production ⁱⁱ	#	–	–	–	–	41
employee	#	–	–	–	–	9
contractor	#	–	–	–	–	32
Recordable injuries (RI) – workforce – refining ⁱⁱ	#	–	–	–	–	56
employee	#	–	–	–	–	24
contractor	#	–	–	–	–	32
Recordable injury frequency (RIF) – workforce ⁱⁱ	recordable injuries per 200,000 hours worked	0.218	0.198	0.166	0.132	0.164
employee	recordable injuries per 200,000 hours worked	0.202	0.152	0.128	0.094	0.117
contractor	recordable injuries per 200,000 hours worked	0.229	0.233	0.193	0.163	0.204
Recordable injury frequency (RIF) – workforce – production ⁱⁱ	recordable injuries per 200,000 hours worked	–	–	–	–	0.316
employee	recordable injuries per 200,000 hours worked	–	–	–	–	0.194
contractor	recordable injuries per 200,000 hours worked	–	–	–	–	0.384

Safety

Metric	Unit	2017	2018	2019	2020	2021
Recordable injury frequency (RIF) – workforce – refining ⁱⁱ	recordable injuries per 200,000 hours worked	–	–	–	–	0.355
employee	recordable injuries per 200,000 hours worked	–	–	–	–	0.359
contractor	recordable injuries per 200,000 hours worked	–	–	–	–	0.352
Hours worked – workforce	million hours	352	331	329	264	221
employee	million hours	145	143	138	121	102
contractor	million hours	207	189	191	144	119
Process safety ^{ee}						
Tier 1 process safety events ^{kk}	#	18	16	26	17	16
production	#	–	–	–	–	2
refining	#	–	–	–	–	6
Tier 2 process safety events ^{ll}	#	61	56	72	53	46
production	#	–	–	–	–	9
refining	#	–	–	–	–	23

Metric	Unit	2017	2018	2019	2020	2021
Vehicle safety						
Severe vehicle accident rate ^{mm}	accidents per million km driven	0.03	0.04	0.05	0.01	0.03
Total vehicle accident rate ⁿⁿ	accidents per million km driven	1.08	0.87	0.91	0.71	0.8
Severe vehicle accidents	#	17	18	24	5	10
Total vehicle accidents	#	547	431	430	261	227
Kilometres driven	million km	505	457	444	329	269

dd bp total figures for safety data includes bpx (onshore US operations). Where the combined totals are broken down, "production" data for safety exclude bpx.

ee This represents reported incidents occurring within bp's operational HSSE reporting boundary. That boundary includes bp's own operated facilities and certain other locations or situations.

ff The total number of fatalities by employee and contractor for bp group.

gg DAFWC – Day away from work cases: the number of incidents that resulted in an injury where a person is unable to work for a day (shift) or more.

hh DAFWCF – Day away from work case frequency: the number of DAFWC incidents per 200,000 hours worked.

ii RI – Recordable injury: the number of work-related incidents that result in injuries or that caused fatality, loss of consciousness, restriction of work or motion, transfer to another job, or require treatment other than simple first aid.

jj RIF – Recordable injury frequency: the number of reported work-related incidents that result in a fatality or injury per 200,000 hours worked.

kk Losses of primary containment from a process of greatest consequence – such as causing harm to a member of workforce, costly damage to equipment or exceeding defined quantities.

ll Losses of primary containment of lesser consequence than tier 1.

mm Rate of severe vehicle accidents (per one million km) involving light and heavy motor vehicles being operated by a member of the bp workforce while undertaking business travel, resulting in fatality, injury, or vehicle rollover.

nn Total vehicle accident rate (TVAR) is the sum of all on-road and off-road motor vehicle accidents per one million kilometres driven. The measure is concerned with any accident, whether it caused harm to any person or only resulted in vehicle damage.

Environment

Metric	Unit	2017	2018	2019	2020	2021
Spills ^{oo}						
Loss of primary containment ^{pp}	#	205	186	237	189	191
Oil spills – number (> one barrel) ^{qq}	#	139	124	152	121	121
contained ^{rr}	#	81	63	90	70	73
reaching land ^{ss}	#	44	49	53	36	45
reaching water ^{ss}	#	14	8	5	10	2
Number of spills production	#	–	–	–	–	21
contained ^{rr}	#	–	–	–	–	16
reaching land ^{ss}	#	–	–	–	–	3
reaching water ^{ss}	#	–	–	–	–	2
Number of spills refining	#	–	–	–	–	34
contained ^{rr}	#	–	–	–	–	13
reaching land ^{ss}	#	–	–	–	–	20
reaching water ^{ss}	#	–	–	–	–	0
Oil spills – volume	thousand litres	886	538	710	784	655
unrecovered ^{tt}	thousand litres	265	131	300	494	308
recovered	thousand litres	–	–	–	289	347
production – spilled	thousand litres	–	–	–	–	59
production – unrecovered ^{tt}	thousand litres	–	–	–	–	7
refining – spilled	thousand litres	–	–	–	–	224
refining – unrecovered ^{tt}	thousand litres	–	–	–	–	89
Water ^{uu}						
Total freshwater withdrawal	million m ³	274.9	268.8	281.0	275.6	239.4
production	million m ³	–	–	–	–	4.1
refining	million m ³	–	–	–	–	231.9
Total freshwater withdrawal – potable water	million m ³	43.2	38.8	39.5	40.0	24.8
production	million m ³	–	–	–	–	0.3
refining	million m ³	–	–	–	–	21.2
Total water withdrawal – freshwater (rivers, lakes, aquifers)	million m ³	225.5	223.8	233.7	227.3	207.1
production	million m ³	–	–	–	–	3.7
refining	million m ³	–	–	–	–	203.2
Total water withdrawal – reclaimed and recycled water	million m ³	0.6	2.2	2.3	3.1	2.4
production	million m ³	–	–	–	–	0.0
refining	million m ³	–	–	–	–	2.4

Metric	Unit	2017	2018	2019	2020	2021
Total water withdrawal – industrial water and steam	million m ³	6.2	6.1	7.7	8.3	7.5
production	million m ³	–	–	–	–	0.0
refining	million m ³	–	–	–	–	7.5
Total freshwater withdrawal in areas with water stress or scarcity	%	–	–	7	7	1
Freshwater withdrawal intensity	t withdrawn/ t production	1.2	1.1	1.0	1.2	1.1
production	t withdrawn/ t production	–	–	–	–	0.0
refining	t withdrawn/ t throughput	–	–	–	–	2.8
Freshwater consumption	million m ³	88.3	85.9	90.8	75.4	53.6
percentage of withdrawal	%	32	32	32	27	22
in areas with water stress or scarcity	%	–	–	16	19	4
Freshwater consumption intensity	t consumed/ t production	0.4	0.3	0.3	0.3	0.2
Discharges to water – production						
mass of produced water managed per unit of mass production	t/t	0.7	0.7	0.7	0.6	0.4
produced water generated	million tonnes	102	101	112	85	49
produced water generated discharged	million tonnes	22	18	19	22	21
produced water generated injected	million tonnes	80	83	93	63	28
produced water generated evaporated	million tonnes	–	–	–	<1	<1
produced water percentage discharged	%	–	–	17	25	43
produced water percentage injected	%	–	–	83	74	57
produced water percentage evaporated	%	–	–	–	<1	<1
oil discharged in muds and cuttings	tonnes	4	122	35	0	0
synthetic based fluids discharged in drilling muds and cuttings	tonnes	1,232	2,389	1,277	27	1,668
drilling chemicals	tonnes	72,230	26,881	31,367	43,523	42,825
production chemicals excluding drilling	tonnes	20,762	18,798	19,764	10,917	17,534
oil discharged – in produced water and effluent	tonnes	278	451	376	432	1,042
hydrocarbon concentration in discharged water	mg/l	12.4	25.4	20.0	19.9	49.7

Environment

Metric	Unit	2017	2018	2019	2020	2021
Discharges to water – refining total water discharged	million m ³	–	–	–	–	59
refining – discharged to third party operated wastewater treatment plant	million m ³	–	–	–	–	13.6
refining – discharged to bp operated wastewater treatment plant	million m ³	–	–	–	–	45.6
refining – chemical oxygen demand (COD)	mg/l	–	–	–	–	38.2
Discharges to water – COD discharged refining	tonnes	–	–	–	–	1,741
Air emissions^{uu}						
Total emissions to air	kt	353	305	296	229	140
production	kt	–	–	–	–	100
refining	kt	–	–	–	–	24
Air emissions – nitrogen oxides	kt	122	115	110	79	43
production	kt	–	–	–	–	27
refining	kt	–	–	–	–	9
Air emissions – sulphur oxides	kt	35	32	23	19	10
production	kt	–	–	–	–	1
refining	kt	–	–	–	–	9
Air emissions – non-methane hydrocarbons	kt	87	64	67	56	42
production	kt	–	–	–	–	30
refining	kt	–	–	–	–	4
Air emissions – methane group	kt	109	95	96	75	45
production	kt	–	–	–	–	43
refining	kt	–	–	–	–	1
Waste^{uu}						
Hazardous waste generated (excluding deepwell) ^{vv}	kt	–	–	–	133.7	156.5
Hazardous waste recovered-recycled offsite (excluding deepwell) ^{vv}	kt	–	–	–	53.1	59.1
production	kt	–	–	–	–	20.3
refining	kt	–	–	–	–	33.8
Hazardous waste disposed (excluding deepwell) ^{vv}	kt	171.0	182.8	142.6	80.6	97.4
production	kt	–	–	–	–	19.6
refining	kt	–	–	–	–	65.5
Non-hazardous waste generated	kt	–	–	491.1	406.3	370.1

Metric	Unit	2017	2018	2019	2020	2021
Non-hazardous waste recovered-recycled offsite	kt	136.0	112.7	262.8	203.2	194.5
production	kt	–	–	–	–	14.6
refining	kt	–	–	–	–	157.3
Non-hazardous waste disposed offsite	kt	286.5	241.5	228.3	203.1	175.6
production	kt	–	–	–	–	63.2
refining	kt	–	–	–	–	83.5
Other						
Environmental expenditure ^{ww}	\$ million	971	1,546	2,319	412	2,195
Environmental and safety fines	\$ million	3.6	1.9	0.8	7.4	0.4
Percentage of major operating sites externally verified to be in conformance with ISO 14001	%	–	–	100	100	100
Number of major operating sites in or adjacent (within 1km) to protected areas ^{xx,yy}	#	–	–	–	–	10
Area of major operating sites overlapping with protected areas ^{yy}	hectares	–	–	–	–	3,365
Number of major operating sites in or adjacent (within 1km) to key biodiversity areas ^{xx,yy}	#	–	–	–	–	3
Area of major operating sites overlapping with key biodiversity areas ^{yy}	hectares	–	–	–	–	551

oo bp totals for spill data include bpx (onshore US operations). Where the combined totals are broken down, "production" data for spills exclude bpx.

pp Loss of primary containment records any unplanned or uncontrolled release of material (excluding small or non-hazardous releases such as water) from a tank, vessel, pipe, rail car or equipment used for containment.

qq Any loss of primary containment of one barrel or more of liquid hydrocarbon (1 barrel = 159 litres = 42 gallons).

rr The number of spills from primary containment. This number contains a small number of unclassified spills.

ss The number of spills which breach containment (primary or secondary) and reach the environment, either to land or to water.

tt The volume of oil remaining in land or water after recovery operations.

uu bp totals and "production" data for water, air and waste include bpx (onshore US operations).

vv Hazardous waste does not include waste which is disposed of under licence to deepwell.

ww Operating and capital expenditure on the prevention, control, treatment or elimination of air and water emissions and solid waste is often not incurred as a separately identifiable transaction. Instead, it forms part of a larger transaction that includes, for example, normal operations and maintenance expenditure. The figure for environmental expenditure is therefore estimated, based on the definitions and guidelines of the American Petroleum Institute.

xx A major operation may exist within or near more than one type of protected area or key biodiversity area.

yy Metric replaces, 'Number of major operating sites in or close (within 20km) to international protected areas' to be consistent with disclosures included in WEF-IBC stakeholder capitalism metrics.

Social

Metric	Unit	2017	2018	2019	2020	2021
Community						
Economic value generated by bp	\$ million	–	303,900	283,300	188,000	167,100
payments to suppliers	\$ million	–	255,900	233,600	165,300	122,200
benefits to employees ^{zz}	\$ million	10,240	10,490	9,836	9,909	8,857
taxes to governments ^{aaa}	\$ million	5,797	7,527	6,913	3,337	5,378
contribution to communities ^{bbb,ccc}	\$ million	90	114	84	77	51
US and Canada ^{ccc}	\$ million	–	22.6	27.8	13.4	11.3
Sub-Saharan Africa	\$ million	–	35.9	13.3	14.1	9.1
Middle East and North Africa	\$ million	–	23.8	16.2	18.9	12.3
Europe	\$ million	–	11.9	12.3	16.1	8.1
Asia Pacific	\$ million	–	12.1	9.8	7.7	6.9
South and Central America	\$ million	–	7.9	4.4	5.0	2.9
Global ^{ddd}	\$ million	–	–	–	2.0	0.0
Contribution to communities – bp Foundation	\$ million	–	6.4	9.1	6.4	3.1
Contribution to communities – bp matching	\$ million	–	6.1	8.3	6.1	4.0
Contribution to communities – natural disaster relief	\$ million	–	0.4	0.4	2.3	0.4
Total dividends distributed to bp shareholders ^{eee}	\$ million	7,867	8,080	8,329	6,340	4,304
Percentage of major operating sites in indigenous land	%	–	–	17	13	13
Community complaints ^{fff}						
damage to property/crops	%	–	23	27	7	3
job opportunities	%	–	23	24	41	11
nuisance (odour, noise and dust)	%	–	21	19	42	59
community investment	%	–	12	10	2	3
other	%	–	11	6	6	11
security arrangements	%	–	7	10	1	0
flaring	%	–	2	4	1	12
discharges to water	%	–	1	0	0	0
impact on traditional indigenous, recreational or cultural activities	%	–	–	–	–	0

Metric	Unit	2017	2018	2019	2020	2021
bp people						
Number of employees	#	74,000	73,000	70,100	63,600	65,900
percentage female	%	34	35	38	39	39
percentage male	%	–	–	62	61	61
percentage female – graduate hires ⁹⁹⁹	%	45	48	45	40	45
percentage male – graduate hires ⁹⁹⁹	%	–	–	–	54	54
percentage female – experienced hires	%	–	40	39	37	39
percentage male – experienced hires	%	–	–	–	63	61
percentage female – leadership team	%	–	15	15	33	36
percentage male – leadership team	%	–	–	–	67	64
percentage female – group leaders	%	21	24	25	29	32
percentage male – group leaders	%	–	–	–	71	68
percentage female – senior leaders	%	24	25	26	27	29
percentage male – senior leaders	%	–	–	–	73	71
percentage female – board of directors	%	–	36	42	45	40
percentage male – board of directors	%	–	–	–	55	60
25 and under	#	–	–	–	–	7,700
26-30	#	–	–	–	–	7,500
31-35	#	–	–	–	–	9,300
36-40	#	–	–	–	–	10,500
41-45	#	–	–	–	–	9,600
46-50	#	–	–	–	–	8,500
51-55	#	–	–	–	–	6,700
56-60	#	–	–	–	–	4,100
61 and over	#	–	–	–	–	2,000
Number of employees – group leaders	#	394	376	378	270	281
Number of employees						
Europe	#	–	–	33,000	31,900	31,500
US and Canada	#	–	–	13,600	10,600	12,800
Asia Pacific	#	–	–	14,700	13,000	13,400
South and Central America	#	–	–	1,500	1,500	2,400
Middle East, North Africa	#	–	–	5,200	4,900	4,400
Sub-Saharan Africa	#	–	–	1,800	1,700	1,400
production & operations	#	–	–	–	–	8,800
customers & products	#	–	–	–	–	43,600
gas & low carbon energy	#	–	–	–	–	4,000
other businesses & corporate	#	–	–	–	–	9,500

Social

Metric	Unit	2017	2018	2019	2020	2021
Women in group leadership	%	21	24	25	29	32
Women at management level	%	30	31	31	32	33
People from racial minorities in UK and US group leadership	%	11	11	14	18	17
People from beyond the UK and US in group leadership	%	24	24	25	30	31
Number of employee exits ^{hhh}	#	-	-	-	-	15,212
25 and under	#	-	-	-	-	4,269
26-30	#	-	-	-	-	2,144
31-35	#	-	-	-	-	1,699
36-40	#	-	-	-	-	1,571
41-45	#	-	-	-	-	1,300
46-50	#	-	-	-	-	1,212
51-55	#	-	-	-	-	1,134
56-60	#	-	-	-	-	1,051
61 and over	#	-	-	-	-	829
male	#	-	-	-	-	8,025
female	#	-	-	-	-	7,160
Asia Pacific	#	-	-	-	-	4,660
Europe	#	-	-	-	-	7,366
Middle East & North Africa	#	-	-	-	-	674
Russia	#	-	-	-	-	24
South & Central America	#	-	-	-	-	223
Sub-Saharan Africa	#	-	-	-	-	304
US & Canada	#	-	-	-	-	1,961
Rate of employee exits ^{hhh}	%	12	12	18	20	24
25 and under	%	-	-	-	-	61
26-30	%	-	-	-	-	30
31-35	%	-	-	-	-	19
36-40	%	-	-	-	-	16
41-45	%	-	-	-	-	14
46-50	%	-	-	-	-	15
51-55	%	-	-	-	-	17
56-60	%	-	-	-	-	26
61 and over	%	-	-	-	-	40
male	%	-	-	-	-	21
female	%	-	-	-	-	29

Metric	Unit	2017	2018	2019	2020	2021
Asia Pacific	%	-	-	-	-	36
Europe	%	-	-	-	-	24
Middle East & North Africa	%	-	-	-	-	14
Russia	%	-	-	-	-	13
South & Central America	%	-	-	-	-	18
Sub-Saharan Africa	%	-	-	-	-	18
US & Canada	%	-	-	-	-	18
Number of new employee hires ⁱⁱⁱ	#	-	-	14,281	9,079	12,742
25 and under	#	-	-	5,795	4,128	5,363
26-30	#	-	-	2,282	1,507	2,245
31-35	#	-	-	1,814	1,162	1,759
36-40	#	-	-	1,431	747	1,187
41-45	#	-	-	1,056	622	812
46-50	#	-	-	807	435	604
51-55	#	-	-	565	246	406
56-60	#	-	-	310	150	230
61 and over	#	-	-	183	80	120
male	#	-	-	7,450	4,609	6,259
female	#	-	-	6,775	4,438	6,458
Asia Pacific	#	-	-	3,307	2,464	5,090
Europe	#	-	-	8,493	5,549	6,579
Middle East & North Africa	#	-	-	311	136	143
Russia	#	-	-	16	7	12
South & Central America	#	-	-	653	101	103
Sub-Saharan Africa	#	-	-	178	110	83
US & Canada	#	-	-	1,323	712	732

Social

Metric	Unit	2017	2018	2019	2020	2021
Rate of new employee hires ⁱⁱⁱ	%	–	–	20	14	19
25 and under	%	–	–	74	58	77
26 – 30	%	–	–	27	21	33
31 – 35	%	–	–	17	13	21
36 – 40	%	–	–	13	7	12
41 – 45	%	–	–	11	7	9
46 – 50	%	–	–	9	5	8
51 – 55	%	–	–	8	4	7
56 – 60	%	–	–	6	4	6
61 and over	%	–	–	7	4	6
Male	%	–	–	16	12	17
Female	%	–	–	27	18	27
Asia Pacific	%	–	–	23	19	38
Europe	%	–	–	28	17	22
Middle East & North Africa	%	–	–	6	3	3
Russia	%	–	–	6	4	7
South & Central America	%	–	–	12	7	9
Sub-Saharan Africa	%	–	–	10	7	6
US & Canada	%	–	–	10	7	8
Pulse survey						
employee engagement	%	66	66	65	64	64
pride in working for bp	%	–	76	75	75	73

zz Includes wages, salaries, share-based payments, benefits and pensions.

aaa Comprises income taxes and production taxes paid.

bbb Includes bp Foundation spend.

ccc Following publication of the ESG Datasheet 2020 a data error was identified that has now been corrected. We are now showing the resulting adjusted figure for 2020.

ddd In 2020 this comprised contributions to the WHO COVID-19 Solidarity Response Fund.

eee This includes dividends paid in cash and scrip dividends.

fff Community complaint data excludes data from bpx (onshore US operations). bpx data is included in all other social metrics.

ggg 1% of graduate hires chose not to disclose gender.

hhh From 2021, the retail population is included in employee exits.

iii Absolute number of new employee hires.

jjj New employee hires as a percentage headcount at the end of the reporting period.

Governance

Metric	Unit	2017	2018	2019	2020	2021
Ethics and compliance						
Concerns and enquiries raised through all reporting channels ^{kkk}	#	1,612	1,710	1,849	1,608	1,414
operating safely, responsibly and reliably	#	237	213	243	251	219
governments and communities	#	49	70	75	60	0
our people	#	839	862	865	684	601
our assets and financial integrity	#	272	333	393	436	377
our business partners	#	209	189	204	132	139
other matters	#	6	43	69	45	78
Concerns and enquiries raised through OpenTalk ^{kkk}	#	820	843	788	600	584
Concerns and enquiries raised – raised with management ^{kkk}	#	792	867	1,061	1,008	830
Separations (dismissals, resignations and supplier terminations) for non-compliance and unethical behaviours ^{lll}	#	202	178	138	79	35
Employees completing anti-bribery and corruption training	#	–	–	11,000	7,700	12,700
Europe	#	–	–	–	–	4,328
US and Canada	#	–	–	–	–	2,630
Asia Pacific	#	–	–	–	–	2,908
South and Central America	#	–	–	–	–	730
Middle East, North Africa	#	–	–	–	–	1,573
Sub-Saharan Africa	#	–	–	–	–	407
Russia	#	–	–	–	–	124
Other						
Countries bp has a presence in	#	–	78	79	72	66
Retail sites	#	–	18,700	18,900	20,300	20,500

kkk Excluding duplicate concerns.

lll Excludes dismissals of contractors/vendors and staff employed at our retail sites. Excludes heliport spot checks.

Key definitions

Areas of water stress and scarcity

Defined as areas of medium to high, high and very high water stress based on World Resources Institute baseline water stress.

Chemical oxygen demand (COD)

The capacity of water to consume oxygen during the decomposition of organic matter and the oxidation of inorganic chemicals such as ammonia and nitrite. COD measurements are commonly made on samples of waste waters or natural waters contaminated by domestic or industrial wastes.

In wastewater treatment, COD is used as an index to assess the effect discharged wastewater will have on the receiving environment.

Fatality

A fatality is any death of an employee or contractor as a result of a work-related incident.

Hazardous waste

Waste that is classified as hazardous (or the regulatory equivalent) by the local regulatory authority.

Key biodiversity area

Key biodiversity areas (KBA) are sites contributing significantly to the global persistence of biodiversity, in terrestrial, freshwater and marine ecosystems.

The Global Standard for the Identification of Key Biodiversity Areas (IUCN 2016) sets out globally agreed criteria for the identification of KBAs worldwide.

Protected area

Protected area is defined as a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (IUCN definition). IUCN refer to 6 different categories of protected area (IUCN category I to VI) corresponding to different levels of protection. Protected areas for the purposes of our reporting metric also include formally designated Ramsar wetland sites and UNESCO World Heritage Sites, and in Europe, Natura 2000 sites. Protected Areas boundaries are derived from the World Database on Protected Areas. For some protected areas in this database, the IUCN category is not reported, not assigned or not applicable.

 See [bp.com/protectedareas](https://www.bp.com/protectedareas)

Loss of primary containment (LOPC)

An unplanned or uncontrolled release of oil, gas or other hazardous materials from a tank, vessel, pipe, truck, rail car or other equipment used for storage, separation, processing or transfer.

Major operating sites

A site or grouping of sites that produce or manage petroleum, chemical, or manufactured products where such products, their production processes, or their exploration processes have the potential to cause significant impact on the environment or the safety and health of employees, neighbours, or consumers.

Non-hazardous waste

Waste that is not classified as hazardous (or the regulatory equivalent) by the local regulatory authority.

Oil spill

Any liquid hydrocarbon release of more than, or equal to, one barrel (159 litres, equivalent to 42 US gallons).

Sustainable emissions reductions (SERs)

Sustainable emissions reductions (SERs) result from actions or interventions that have led to ongoing reductions in Scope 1 (direct) and/or Scope 2 (indirect) GHG emissions (carbon dioxide and methane) such that GHG emissions would have been higher in the reporting year if the intervention had not taken place. SERs must meet three criteria: bp made a specific intervention that has reduced GHG emissions, bp must be able to quantify the reduction and the reduction is expected to be ongoing. Reductions are reportable for a 12-month period from the start of the intervention/action.

Tier 1 process safety event

Losses of primary containment of greatest consequence – causing harm to a member of the workforce, costly damage to equipment or exceeding defined quantities.

Tier 2 process safety event

Losses of primary containment of lesser consequence than tier 1.

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